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ABSTRACT

This collection of papers concentrates on alternate approaches to education and the necessity for considering indigenous modes of education. Seven chapters include (1) "The Early Peace Corps: A Retrospective on Cross-Cultural Learning" examines the Peace Corps as a new kind of overseas work; (2) "Analysis of Differences in Cognitive Development in Selected African and Western Societies" reviews Piagetian concepts within an African context; (3) "Language and Development in Eastern Indonesia" looks at an English program at Washington State University for Indonesian graduate students; (4) "Mexican Museums: Educational Ventures" deals with an attempt to set up a system of school museums; (5) "Relevant Education in Northern Nigeria" analyzes education in Nigeria as a result of colonial policies and describes an indigenous program, the Relevant Technology Workshop; (6) "Kitchens are for Sleeping: Anthropology and the Training of Architects" illustrates the value of anthropological studies for architects in training; and (7) "Appropriate Education as a Development Resource in Rural India" addresses the problems inherent in providing effective modern education to rural India. (KWL)

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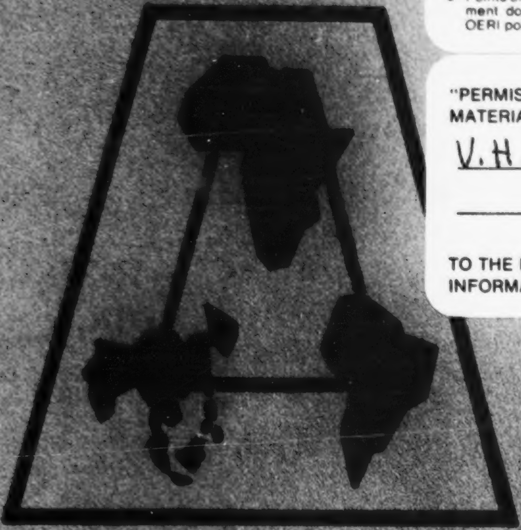

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Guest Editor

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DEDICATION

I wish to dedicate this volume to the memory of my son, Patrick Eugene Salamone (March 26, 1966 - September 10, 1984) and to hopes for a spirit of compassion in teaching all those who are different.

INTRODUCTION

From its earliest days, field anthropology has concerned itself with education; i.e., with how people learn. Certainly, that was as true of the Torres Straits Expedition as it is of any papers in this collection. One could make a strong argument, in fact, that anthropology's primary study has been that of education and its processes.

It was, after all, anthropology that forced us to redefine education as the transmission of culture and to include more than classroom schooling in that definition. Although I am not satisfied with the simple dichotomy of "formal" and "informal" education that most frequently replaced it, at least that dichotomy has generated significant research over the years. Think, for example, of much of the work on "bush schools" and other initiation institutions.

But anthropology has done more than examine the external environment of learning. It has kept pace with and, from time to time, goaded psychology. The whole range of cognitive and developmental studies illustrates that point. Mead and Erikson, for example, influenced one another. Piaget has exerted tremendous influence in anthropology but, in turn, cross-cultural insights have offered needed correctives to his grand theory.

In sum, it is no surprise that the largest segment of anthropologists within the American Anthropological Association is that of Anthropology and Education. I am convinced that the field process itself forces field anthropologists, no matter what else we study, to pay attention to educational processes. We become aware of learning and its all-pervasive presence. That is true whether we are concerned with adaptation or symbolism. For what else is adaptation but learning to live with our environment and symbolism, learning the meaning of cultural things?

It is true, however, that even anthropologists tended to rely too heavily on Western models of learning even as we exposed their ethnocentrism. I do not believe that we were ever as guilty, and certainly not as calculatingly malicious, as some critics portrayed us. In fact, a more anthropological, that is, contextual, approach would have seen that those of us who assumed that we were using universal models were, in fact, overusing Western ones and were merely blinded by our own culture. The critics did, of course, serve a useful purpose. They forced us to address the need to examine alternate and/or complementary models of education.

Chief among the gentler and more useful critics has been Francis Hsu. Hsu's various works have inspired anthropologists since the 1940s while offering Western anthropologists Eastern models of human nature and culture. Hsu, of course, is thoroughly bicultural and has presented his ideas in forms that those who are not Chinese specialists can understand. So stimulating have his ideas proven that in 1983 the Association of Third World Anthropologists presented a symposium in his honor. The current volume has resulted from work on that symposium and is dedicated to Francis Hsu.

The papers in this volume include many ideas linked to Hsu's work, directly or through intermediate steps. They all concentrate on alternate approaches to education and the necessity for taking indigenous modes of education into account. Each, interestingly, does so in a different way. Roach examines the Peace Corps, from within, as a kind of missionary organization. Malone examines Piagetian concepts within an African context. Fleischer looks at an education program in English at Washington State for Indonesian students. Etherington deals with Mexican adult education, Salamone with differential education in Nigeria as a result of colonial policies. Potash examines University education in Eastern Nigeria. Each paper in the volume seeks to understand the interaction between Western and indigenous forms of education. Each seeks to understand emic views of various participants in the educational field.

And that attention to context, to fields of interaction, to "insider" views, marks off the best in anthropological educational research from mere studies of "quantifiable progress on test A, B, or C". Finally, Abliband addresses the issue of appropriate education and its role in development.

Education will continue to play a central role in anthropological research. It is, after all, a key to understanding adaptation culture change, religion, symbols, enculturation socialization, and other major areas of the field. These papers make a contribution to the study of anthropology and education and, therefore, to anthropology as a whole.

THE EARLY PEACE CORPS: A RETROSPECTIVE ON CROSS-CULTURAL LEARNING

PENELOPE M. ROACH

Department of Sociology and Anthropology
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PEACE CORPS GOALS

To help the people of interested countries and areas in meeting their needs for trained manpower.

To help promote a better understanding of Americans on the part of the peoples served.

To help promote a better understanding of other peoples on the part of Americans.

The Peace Corps Exchange - A Question of Definition?

At a particular historical period a restatement of cultural ideals or goals is made and a particular tradition thrusts forward in new form. The development of the Peace Corps in March, 1961 was such an expression of the shaping of United States cultural history. Its roots, as others have pointed out, were imbedded in our recent past from the New Deal to Point Four, as well as in our anti-colonial and pioneer past and in the growth of nineteenth and early twentieth century movements for social justice.

During the post-World War Two era, there had been an expansion of ideas of international voluntary service. Religious organizations had already recruited and placed lay volunteers in the field. The academic world was expanding its international programs; a few, for example, Yale and Columbia Teachers College, were placing student volunteers or teachers abroad; there were new interdisciplinary area studies programs and schools of international service. Short term private voluntary educational or service-oriented programs like the American Field Service (AFS) and the Experiment in International Living were given new impetus. In 1947, AFS, founded originally in 1914 as a volunteer ambulance corps, was re-established as a youth exchange program, and by 1960, the American Friends Service Committee established its work camps overseas. International Voluntary Services (IVS) was founded in 1953 as a private support effort to the Point Four program, and Crossroads Africa was founded by the Rev. James H. Robinson in 1957. The Peace Corps drew on these many traditions of cross-cultural exchange, volunteerism, and humanitarian service.1

President John F. Kennedy had moved quickly in implementing the idea of a "Peace Corps" after it had received much popular response during his presidential campaign. The idea had already been brought up in Congress and a feasibility study had been commissioned in 1960. How would the Peace Corps be organized and how would it be different? According to Harris Wofford (who coordinated the President's Task Force on the Peace Corps and who had helped found a small international service agency, the International Development Placement Association, in the early fifties),

> The Peace Corps would constitute a new form of overseas work. Volunteers would not be missionaries, business representatives, government officials, intelligence agents, or researchers. Nor would they be high-level experts or advisers. They would go in a new capacity - to teach or build or work in the communities to which they were sent, serving local institutions and living with the people they were helping. Without any aspersions on the 33,000 Catholic and Protestant missionaries then said to be overseas or the businessmen, government officers, and scholars working abroad, Peace Corps volunteers would be different: they would go with a different purpose, operate in a different relationship to their host country colleagues, and presumably return with different results.[2]

The Peace Corps was both a new concept and a link between the tradition of private efforts and the post-World War Two expansion of the United States government's technical assistance role abroad. Kennedy had also in 1961 replaced Eisenhower's International Cooperation Administration (ICA) with the new Agency for International Development (AID). Indeed, as Wofford describes it, Shriver and those who supported his idea of an autonomous Peace Corps had to battle the "powerful foreign aid experts" who wanted to make the Peace Corps a subdivision of the new AID whose directors would control aid programs overseas.[3]

More than 80,000 people have served in the Peace Corps since it was created in 1961. Returned Peace Corps volunteers can be seen in many visible roles - in Congress, in the top ranks of higher education, government and international agencies, in business and financial institutions, as private entrepreneurs, in the mass media, and among the ranks of well known writers.

Many more returned volunteers can be found working in these same and other places in less visible roles. For many, whatever their occupation or identity, the core of their learning and experience, and the most formative experience central to that identity has been, in their own words, their Peace Corps volunteer experience.[4] Whether or to what degree this acquired core of consciousness is imparting new meaning to American culture has yet to be studied or understood... To many returned Peace Corps volunteers the centrality and significance of that cross-cultural experience is also more easily communicated to each other than to other parts of their own culture.

The second and third goals of the Peace Corps were to effect cross-cultural exchange and understanding. Implicit within the third purpose was the assumption and belief that volunteers would learn the complexities and sensitivities of other cultures, and learn them sufficiently well that such cross-cultural knowledge and understanding would be infused back into American culture. Yet as one reviews the literature on the Peace Corps of the past two decades, there remains considerable ambiguity in the multiplicity of comments and analyses in their interpretation of what was experienced and learned by Peace Corps experience are for the individual volunteer. Nor do we know what the effects are of large scale cross cultural exchange for American culture or for "the other culture". In 1965, the Peace Corps reported that "it came to be the mixed fortune of the Peace Corps that it was loved without being understood," and it pointed to the "problem of defining the special experience of the Peace Corps."5

Of six thousand people who showed up for the first nationwide selection examinations, four hundred and seventy were accepted and in training or overseas by the fall of 1961, by which time the first group of volunteers in the field, the fifty-one volunteers to Ghana, was one of seven Peace Corps groups overseas. The other groups were in Nigeria, Tanganyika (Tanzania), Chile, Colombia, St. Lucia and the Philippines. During the summer of 1961, while planning and operations were begun and Sargent Shriver was seeking authorization and funding, four hundred and thirty nine volunteers were already in training. Thirty-seven volunteers went to Nigeria and thirty-five more went to Tanganyika, and shortly thereafter two more groups were in training for Nigeria and another group was in training for Sierre Leone. By January 1962, there were two hundred and twenty-three volunteers in these four African countries. By March, nine hundred and twenty volunteers were being selected or had begun training for Africa and by June, a total of almost five hundred volunteers were in training for eight sub-Saharan African countries. This momentum continued during the early period of the Peace Corps in Africa - while in 1961, there were only seven hundred and sixty-one volunteers and trainees in total, in 1966, when the number of volunteers had peaked, there were over seven hundred volunteers in Nigeria alone.6

What was the experience of the Peace Corps in Africa during these years? Obviously there many different levels of cross-cultural experience, yet as one surveys the various sources in search of concrete evidence as to what that experience has been and meant, certain patterns emerge. In order to clarify the meaning of these patterns the following case study focuses on the first group of volunteers to Ghana as it re-examines the meaning of the cross-cultural experience as it developed in the Peace Corps and as it developed over time to a group of individual Americans who nevertheless represented a particular thrust of culture in the early sixties. The material presented draws particularly on interviews and correspondence with the Ghana One volunteers, as well as on historical documentation and research, and on participant observation in the Peace Corps and returned Peace Corps volunteer culture over the past couple of decades.

The Ghana Volunteers

On August 30, 1961, an article appeared in the New York Herald Tribune - "Peace Corps' 1st Unit Off Happily to Ghana.... Beaming Ghanaian Ambassador W.M.Q. Halm saw the first contingent off for his country. They had been guests at a reception last night at Ghana's Embassy. 'We are so proud we are the first to be served by the Peace Corps,' Mr. Halm told a reporter. 'We're sure the experiment will yield dividends.' President Kennedy had bidden farewell to the Peace Corps members at a White House reception Monday." But as one of the training team for the first group of volunteers pointed out, there was indeed sensitivity on the part of African governments to the role and opinions of and about the Peace Corps volunteers. (As the first well publicized incident over a postcard sent home from Nigeria by one of that country's first volunteers illustrated.) Nevertheless, despite the passage of a resolution at the Afro-Asian Solidarity Conference in Cairo in April, 1961 that condemned the Peace Corps as an agency of neo-colonialism, there was a general acceptance that the

Peace Corps would be a rapid method of meeting the crisis of expanding educational systems. It was also noted that there was a view that volunteers would teach practical skills.[7] President Kwame Nkrumah, Ghana's first President, is quoted as saying, "Peace Corps Volunteers who will teach, but not propagandize or spy or try to subvert the Ghanaian system, will be very welcome. I do not want them to teach the social sciences. There their biases would influence our young people."[8] The most extensive role that the Peace Corps filled in the sixties in Africa was in education, and the delicacy of that role was evident early on in the Ghana Peace Corps experience. George Carter, the director of the first Ghana project, commented that there were any number of times the Peace Corps might have been ejected from Ghana but, in his view, the most critical time was in 1962 when President Nkrumah realized that a number of volunteers were teaching history.[9] At that time, political events also threatened the continuous existence of the first project. Recent historical research gives evidence to the rumors heard and accusations leveled by Nkrumah at the time. Events during 1962, especially during November and December, including the Central Intelligence Agency's meetings with and support for Nkrumah's opposition, also prompted Nkrumah to threaten expulsion of the Peace Corps volunteers.[10]

As one of the first groups in training and the first in the field, the Ghana group, which became known as Ghana One, also became the recipient of a good deal of attention and bore the weight of the various symbols that were quickly attached through heavy media coverage to the Peace Corps volunteers. Whether it was cynical image of the "Kiddie Korps" or "Kennedy's Kids" or "Do-Gooders in Bermuda shorts and button down shirts" or the idealistic image of what one magazine called "that bold experiment" which would "prove...at least (that) the Peace Corps is one of the brightest lights of the New Frontier," the Ghana volunteers were well aware of and very sensitive to image-making from whatever source.[11] For some observers the response to the Peace Corps' call proved that "there exists in a good part of the United States, a healthy nucleus," which marked "the demise of the so-called beat generation." The early volunteers were categorized either as idealists looking for "a cause as generous as their energies" or realists who are "reserved, serious and decided, they have know-how and professional ability, and they are under no illusions."12 By November, 1961, Ghana One was being evaluated as the Peace Corps' first real field test, and despite former President Eisenhower's derogatory remarks about the Peace Corps as a "juvenile experiment", the Peace Corps was being praised as a "most pleasant surprise" in Time magazine.13 The Ghana volunteers received individual letters of congratulations and thanks from Senators Javits and Humphrey, Assistant Secretary of State G. Mennen Williams, and one from President Kennedy which read:

> At home and abroad, the Peace Corps has been recognized as a genuine and effective expression of the highest ideals and the best traditions of our Nation. You and your fellow volunteers have made that judgement possible.
>
> I am proud of your participation, and I trust that in your second year of service your conduct and performance will continue to reflect credit upon you and the Peace Corps.14

If anyone of the Ghana volunteers did not know why they joined the Peace Corps,they had certainly been told.

As a generation, from child to young adult, the education of the Ghana volunteers had spanned the years of World War Two, the atomic bomb and Hiroshima, the beginning of the United Nations, the Marshall Plan and Point Four, the Cold War, the Korean War, the McCarthy era,the 1954 Supreme Court decision and the beginning of the Civil Rights movement - all events reinforced in the classroom as well as in memory. There was by 1961 a growing economic prosperity. More important, the spirit and hopes of the New Frontier, the personal commitment and public acknowledgement by President Kennedy that new kinds of human relationships at home and internationally were needed and possible of attainment, made the concrete reality of the Peace Corps seem a logical step in the course of progress.

The Ghana volunteers collectively represented a microcosm of a larger configuration in American culture and a composite of its many elements. Many were oriented by family background (for example, by the influence of a family's immigrant history or religious values), or by intellectual and academic interest and training, or by some international experience, toward cross-cultural interests, and many more were motivated by the idea of humanitarian "service to others". Several members of the group had studied or worked abroad through university programs, the Experiment in International Living or Crossroads Africa, and a few came from families in which parents or relatives were missionaries or academics who had lived and worked in other cultures. Most, as they describe it, were "out there" ripe and eager for the Kennedy call. For most it was "too corny to admit" but the call to serve in some unselfish way and the desire to do service was real even if not publically admitted. The fact that there was support to put such ideals into action, that the economy was good and they needn't worry about getting jobs, made them "feel free to look outside themselves", "to work for humanity" and to "take the time and whatever risks there were" to develop their lives personally and to join an experiment that was exciting and challenging. The social-psychological studies undertaken on various groups of volunteers on motivation for joining the Peace Corps confirm what one might expect. Such statements as "gaining an inter-cultural experience" were the reasons most frequently chosen for volunteering. As Joseph Coleman, Peace Corps psychologist, pointed out, the complexities of motivation are multi-dimensional and some are not likely to be revealed to psychological researchers.[15]

To the Director of the Ghana volunteers, the first group was a "group of mavericks" whose primary motivation was a mixture of a "sense of mission," that made them feel that whatever was important in their lives at the time, could and should be put aside because what the Peace Corps mission was was more important, and of "adventurism" that was an eagerness to work with the unknown. Their immediate response to the Peace Corps was deep-seated in the cultural dynamics of the time. They could, in his view, "be considered the first publicly recognized manifestation of the cultural rebellions among the youth that followed them, but the rebellions of the early volunteers were rooted in the kind of constructive action the Peace Corps offered." Carter has characterized them further as mature risktakers who had grown up in an age when the sense of stability and power of the United States was accepted as fact. "Even for those volunteers whose families were of an immigrant generation or who had experienced the insecurities of the Depression, such factors as the belief that the United States had "won the War", had launched the Atomic age and created the miracle of the economic peak of the fifties, were part of their education, making them more certain that whatever their background,they could with their college education achieve and prosper in American society." (He also pointed out that this was generally not true for young Black graduates and was part of the reason why the Peace Corps had difficulty in recruiting them.)16

David Riesman (sociologist, author of The Lonely Crowd and Peace Corps Advisory Council member) wrote, as did others who were involved in the early assessments of volunteers, that the Peace Corps was for some a time-out or moratorium from academic life or introspection and suggested that for others it was an opportunity to make a temporary commitment to the service of the less privileged.17 Many of the Ghana volunteers saw it rather as a time to "plug in", as part of a search for a commitment, a cause, and a counterbalance to an acquisitive, affluent society. The Ghana volunteers were consciously antithetical to the conformist, apathetic "social types" that were described in the literature that described the youth of their generation. Among the Ghana volunteers there was a deviant individualism that showed itself during training and while in service, in Ghana: an anti-organization, anti-bureaucratic mindset, and a willingness, even eagerness for some to be non-materialistic achievers, that as one volunteer has said became "less grandiose with age." The following excerpts from letters written by some of the Ghana volunteers as they undertook their Peace Corps service illustrates the range of their responses as they settled into teaching in Ghana:

> as Kennedy said, the whole world is looking at us and we must make a success of the project. I personally think it's one of the greatest aspects of the great American Experiment. I can't tell you how glad I am to be a part of the program. This is a foreign aid that is intensely personal and the people identify it with a living representative from America....even though what I'm doing is insignificant in the great scheme of

> things, it is a start in the right direction. Ghana needs teachers desperately and to be of service in a country that is alive with anticipation for a better future is rewarding in itself.
>
> There seems to be so much we can do at this person-to-person level. When I first accepted the Peace Corps telegram, I was sure the decision involved a sacrifice for my country. Perhaps at that time this was true, but subsequent rewards have long since removed that impression. The teaching, the travel, the treatment from all sides have been magnificent. Ghanaians have been receptive hosts.
>
> I spend a good deal of time with my Ghanaian friends discussing the days events or going to dances at the Town Hall...(and in reference to a Ghanaian teacher and room-mate) - She is a delightful person who is surprised at the lack of cultural barriers between us. Many Ghanaians imagine European life to be basically different from theirs. That we experience similar fears, jealousies and joys can be rather strange to them.
>
> In discussion with some of the other members of this terrific group, it has often been expressed that the Corps is wasting some money, and that if the main office wants us to have this stuff (information and articles on the Peace Corps) the least they can do is to send it by sea at a big saving... My own opinion is that, in joining the Corps, I had looked forward to spending two whole years away from the horrors of our own culture, mainly electric can openers and junk mail. So far I've managed to evade the former, but the latter has been coming in a steady stream in the form of reprints of various articles.[18]

Fortunately, the enthusiasm for Ghana on the part of the training staff of the first project, and the intensity, spontaneity and personalization with which the training and program was launched had reinforced what came to be recognized as the "spirited" response and sometimes "vehement" expression of Ghana One. Despite their jocularity, there was, in the words of the volunteers, a faith in the public statement of President Kennedy and the Peace Corps that the individual, as person and citizen, could make a difference in relationships between peoples. For many in the Ghana group that faith took on a much longer term meaning.

Cross-Cultural Leaning: Interpreting the Field Experience

As one reviews the literature in relation to "success" or "failure" of the Peace Corps as an experiment in large scale cross-cultural education, the evidence as far as it can be measured by the opinions and attitudes of volunteers weighs heavily on the side of positive gain for the volunteers. Yet what was achieved in terms of people-to-people exchange raised some contention between the Peace Corps Washington and the volunteers, more over what was being measured than overall results.[19]

It became and remains common place to hear returned Peace Corps volunteers say that they "gained more than they gave" in assessing their cross-cultural experience. What they believed they gained ought to help clarify how the third aim of the Peace Corps was being fulfilled. While the many teaching projects in Africa may bear more clear evidence as to the success of the first and second goals of the Peace Corps[20], a comparison of the Ghana volunteers' assessment with those from some other non-educational projects, reinforces the opinion of those, who besides the many volunteers, conclude that, "for volunteers, the Peace Corps was as much a process of self-discovery as discovery of other. Yet understandably, they found it difficult to articulate the extent and quality of the Peace Corps' impact upon themselves"; and "there is no doubt that the Peace Corps contributed a great deal to cross-cultural understanding."[21]

Those volunteers who were technical specialists such as the Ghana Three group of geologists or those who worked in the seventies for the special Smithsonian Peace Corps Environmental Program, and who where hydrologists, fishery managers or other ecologists, were generally as positive about what they learned about "culture" and other cultures. "What makes the differences is not only living in a foreign culture but being a producing member of that culture," or as a landscape designer summed it up -

> The Peace Corps experience has broadened my view of the many ways to look at problems and solutions just by having been able to live within another culture and see how different perceptions can be. A further understanding of people and a realization that though there are many views a man can have depending on his upbringing, culture and language, people have the same basic needs of love, respect and dignity.22

For the Ghana volunteers, the main role of the volunteer was doing the job, contributing to the country's development; and there was no question for the volunteer or even for Peace Corps Washington that the Ghana volunteers were needed and felt satisfied that they were fulfilling their role by fulfilling real needs as these were articulated by Ghanaians. To the volunteer, however, a more difficult question was how the "giving" could be weighed against what was being "gained". By what ruler was meaningful, equal exchange to be measured, for in the estimation of the volunteer, the main reward was what was reaped from the cross-cultural experience. What the volunteer experienced and learned, and what was exchanged on both sides of the cultural equation, is, in the long term, probably the most significant part of the cross-cultural experiment.

The views of the Ghana volunteers and their assessment of the Peace Corps experience seem representative of several central themes that emerge in reviewing the literature on and by Peace Corps volunteers. Despite the great diversity and individuality of volunteers, the ideas that were symbolized by the early Peace Corps emerge clearly in the reflections, accounts and commentaries of volunteers. The views of the Ghana volunteers in retrospective gave validity to the idea that the ideals and symbolic cultural intent attached to the Peace Corps took on real cultural meaning for many through their experience in the person-to-person cross-cultural situation.

As they look back, many of the volunteers speak of a change in their cultural consciousness, specifically in relation to their development of the role of "Peace Corps volunteers" and in their development of bonds to Ghanaians and Ghanaian culture. For some, there has been a transference or extension of this consciousness which has persisted in varying degrees over the subsequent two decades of their lives. In their perception, the nature of their cross-cultural experience and change in consciousness differed in some ways from that of other expatriate groups. While, particularly in some aspects of their work, the volunteers were in their estimation, little different from other expatriates,they are conscious of a difference in their expectations and ideas concerning the kind of cross-cultural involvement and contact they had desired or sought. A primary value was given to living within the culture, to bridging cultural barriers, to personal exchange that eliminated the "we" and the "they", the "have and the have nots", and the image of the "ugly American". The conflicts that volunteers experienced over hiring someone to market or cook for them, over whether they should have a gas stove or refrigerator, or whether they should be using anything other than public transportation or how they should use their vacation time were part of the debate over both the "Peace Corps image" and implementing or "bearing witness" to the Peace Corps ethos. The conflict went on with Peace Corps Washington, among the volunteers, and within themselves.

The Ghana volunteers saw themselves as anti-colonialist and, in this respect, apart from the British expatriates, as antagonistic to proselytization, religious or patriotic, as non-missionaries, and also as different from other American expatriates engaged in technical foreign assistance. They were aware of the initial skepticism and sometimes, the hostility, of some other expatriate groups, and were chauvinistic and possessive about their own legitimate role in the development of "this our modern Ghana," a phrase taken over from their students. Nevertheless, there was as one volunteer perceived it "a quasi-missionary" role they had accepted. Although they felt uneasy with the idea stated by Peace Corps observers in those early days, that they were "the best of America serving among the needy," they admit they shared with missionaries and the missionary tradition some of the same impulses that "being blessed by wealth implies service."

While they also shared more with missionaries in the development of their new cultural role in another culture, in the kind of acculturation experiences they underwent working at the grassroots in the educational system, they were ultimately not seen as "missionaries" or as "professional technical assistance experts". In their own eyes and gradually in the eyes of Ghanaians, "they were different". An interesting illustration of this process of role differentiation is when some headmasters were puzzled by the volunteers' refusal or disinclination to participate in the morning religious observances held in many of the private and government schools in which faculty were usually asked to read prayers or from the Bible.

The volunteers, consciously or subconsciously, compensated or coped with this role ambivalence by stressing their professional role as teachers. They became equally determined to steer clear of being identified as "missionaries" of the United States government or anything else that smacked of image-making in this regard. Their interpretation of their role caused some resentment toward the Peace Corps Washington's intrusions, Peace Corps' evaluators expectations of them, or Peace Corps watchers. All of these people were probing to see either concrete results of their "work" or manifestations of their alliances or friendships with Ghanaians. These latter came to be called "host country nationals" by Peace Corps Washington. The one thing guaranteed to reap anger and hostility at Peace Corps Washington was for the latter through its representatives, evaluators, or visiting congressional delegates to measure "success" or "cross-cultural achievement" in terms of the number of host country friends a volunteer had made or whether the volunteer was promoting what the latter considered a manufactured "Peace Corps image."

When the Ghana volunteers and their successors were asked in the early sixties as they completed their Peace Corps service to review their experience, they expressed some frustration at difficulties encountered in establishing close relationships with Ghanaians other then their students or with their colleagues or peers.23 During their first year, many had expressed amazement at the ease with which they were received by Ghanaians and their counterparts, and there is an overwhelming consistency in their assertions that despite any difficulties "relations with the Head and other teachers are really good, not just amiable, but genuinely friendly."24 Yet many of the volunteers were aware that close relationships were more possible with those of more similar educational background, and that even then one had to be sensitive to ethnic, religious and political differences. They gradually learned that they had to relate not to an abstract nation or people but to a pluralistic Ghana whose society and culture was differentiated by class, occupation, ethnicity or politics. As one volunteer put it, the first semester was full of enthusiasm and excitement; the second semester brought one face to face with realities.

A study of the volunteers had concluded that a minority of volunteers made "real friendships with their African counterparts", and pointed out that for most of the volunteers, the intensity of the cross-cultural field experience was modified and controlled to some degree by the nature of living in a school community and that they explored "the more traditional African culture to their own taste and at their own pace."25 For the volunteers, the nature of that pace, of time, of friendship, of the realities of cultural accommodation, both within and outside the school community, were complex and not easily divisible. The cross-cultural experience engendered not only some self-conflict but conflict with the idea that cross-cultural learning could be easily categorized or measured. By the end of the first year, volunteers could admit that "avoiding all mistakes was futile but what was more important was how we handle ourselves when we make them. I have made plenty over here", and that the pace of cross-cultural perception was slow - "by this time associates and students treat me as an individual, not as a member of a foreign organization."26

While another evaluation of the Ghana One volunteers pointed out that despite the isolation of the school and local community, "most of the volunteers appear to have set up moderately successful social relationships, at least with small groups in the communities,"27 the volunteers' attitudes were evident in their early expressions of concern over Peace Corps Washington's alleged paternalism toward both the volunteers and the host culture, and the danger of too much interference from what they feared was a growing Peace Corps bureaucracy. For the volunteers, attempting to break through cross-cultural barriers could not be programmed by Peace Corps Washington. While for the volunteer, it was admittedly a difficult area, the volunteer's interpretation of what was happening and how differed markedly from the Peace Corps' perception of a lack of relationships with the wider Ghanaian community.28 To the volunteers, the question of "relations with Ghanaians were their own affairs."29 The ethos of the volunteers was that their role as volunteers in development and as teachers was what could rightly be evaluated, whereas the cross-cultural learning experience was a private search, a series of private successes or failure and not to be counted or measured. (The ethos of the volunteers had already been revealed during the course of their training at Berkeley when they resisted with humor or boycott some of the extensive psychological testing they had been subjected to as "nobody's business" or "irrelevant" to their perception of the Peace Corps' goals.)

The volunteers argued and the final evaluation agreed that the strength of the student-teacher relationship, and of the bonds and friendships that developed (some of which continued for many years) were valuable per se as a means of cross-cultural exchange, and that they did most likely provide "unmatched opportunities for meaningful relationships."30 What has been understated is the extent to which these relationships and those with their colleagues provided opportunities to extend the acculturation process to other parts of the culture. Both sets of relationships were often the entree to further cross-cultural learning and other relationships. Many, if not most, of the schools represented a cross-section of Ghanaian culture, in which volunteers could not help but learn about family and kinship, religious beliefs and practice or local economics. Most volunteers went to local festivals, participated in some local ceremony, memorial service or "out-dooring" of an infant, or other religious or political ritual, met and visited with students' families, went to local dances, bars, stores, markets, churches or post-offices, or ended up taking an ailing student to a local dispensary or clinic. Whether they sometimes shared meals or drank beer with Ghanaian colleagues, finally learned the art of "dropping-in" or visiting Ghana-style, or rode "lorries" (buses) or went on "excursions" with a fellow teacher or student, they experienced with them most of the crises and joys of daily living, and living by Ghana-time and in Ghanaian space. Some of the kinds of opportunities varied, of course, particulary depending on the kind of community in which the volunteer lived. An account by two of the volunteers who lived in the capital city attests to the variety of experiences and relationships that could and often did develop when living in the burgeoning and unpredictable urban culture.31

The Returned Peace Corps Volunteer: A Question of Effect and Transference

The experience of acculturation and the psycho-social development of shared values, bonds, and norms takes place very individually and gradually. The commitment to one's role as a Peace Corps volunteer was perhaps more individualized and differentiated since it not only stemmed from many sources but was new for both the volunteer and host culture. On a group level, however, the ideas and symbolic values of the Peace Corps experience were heightened by the shared intensity of the training program, the idea of a common cause, and the shared experiences of the volunteers. Thus, some of the longer term effects of the Peace Corps cross-cultural experience may be similar for many volunteers - an extension of one's loyalties, both to individuals and to another culture, to one's sense of "work" and what is to be valued, and to some central value concerning a common humanity, to "being a citizen of the world." A volunteer described his feelings after his first Christmas in the northern region of Ghana after he had been presented with a gift of vie eggs from the headman of a village with the apology that "the hens have disappointed us today" - "He could not have made a more eloquent demonstration of the greatness of human generosity".32

Whatever the depth of their interactions with Ghanaians and Ghanaian culture, or whatever limitations interfered (and most admit that the lack of fluency in a Ghanaian language was an obstacle), their involvement was significant enough for many to have created interests, sensitivities, and even commitments to another culture that induced or reinforced some ideals or concerns which have affected their work, families, friendships and interaction with others. Whether they "became a different person in a large part of my personality and outlook" or, as one volunteer dramatically stated: "my acculturation was like becoming pregnant... Our roots allowed us to think we could influence the course of events simply or easily. American energy, education and technology can do it. We underestimated the energy and complexity of third world people. It stripped down our attitudes of superiority and yet left me with the feeling that the individual can make a difference...for all its folly it was absolutely right."

For most of the volunteers, it meant, at least, a new tolerance and respect for other cultures. A few volunteers expressed the idea that some of them had become almost too tolerant - unwilling to judge other cultures at all. Even for those who express the most skepticism or are most cynical about the continuing possibility of implementing Peace Corps ideals in the eighties, there is still a firm belief in the value of the Peace Corps as an idea and for the value they feel it had for themselves and the students they taught. One reservation that lingers is their concern as to whether education creates expectations on the part of those students that might never be fulfilled. Regardless of the effectiveness of volunteerism in long-term devleopment, in reducing poverty or sharing the world's resources, the volunteers place a high evaluation on the value of person-to-person cross-cultural give and take, and on the bonds developed with students, teachers and Ghana. Many of the volunteers believe that the ideas and values which were shared were sufficient enough to have formed a core of cultural consciousness that affects their identity and roles, and that the challenge of what they learned continues despite different life histories.

As they left the Peace Corps, what the Ghana One volunteers had learned in turn about their own culture was most often expressed in terms of concern over the conflict between the meaning and reality of equality, racism and the progress of civil rights. The volunteers believed and continue to believe that their experience made them more tolerant of others and more intolerant of racism. The problem of communicating at home not only what they had learned about other cultures but from other cultures was seen as their next and difficult challenge.

It is evident in reviewing the careers of the volunteers that there has been for most a continuation and transference of their commitment to education and to social and international issues. While only a few have pursued continuous careers directly in international development, some worked for the Peace Corps for several years and another group directed their graduate studies toward African studies, international development or related areas. While their careers are various, the majority of the former volunteers have continued to direct their lives toward education and public service, through teaching, administration, special education, social work, urban planning and government, law, nutrition and film making. Many of the volunteers continued to work for specific social and international issues, especially in the decade after their return. While some were involved in civil rights organization, anti-Vietnam war and peace groups or support groups for Southern African independence during the sixties, some others were also active in the following decade in feminist and anti-nuclear groups. One of the group was instrumental in founding, and remains highly involved with, Oxfam America. Many have remained involved in both domestic and international issues through institutionalized structures, voluntary organizations, and educational, legal or political structures.

What is less understood is what other kinds of challenges to their cultural norms developed as a result of their cross-cultural work in the field, and which persisted and effected changes in their behavior and life decisions. Some questions that are raised about the effects of cross-cultural education are not as easily answered. While it is easy for the volunteers to identify sentiments - "I get homesick when I hear Highlife (popular Ghanaian music)" or the nostalgia associated with eating Ghanaian food or using "Ghanaisms", it is more difficult, if not impossible, to ascertain, for example, on what level or to what extent various aspects of acculturation were transferred and sufficiently internalized so as to effect their willingness to break through cross-cultural barriers or biases in American culture. Though most volunteers would agree they left Ghana with a new appreciation and sense of family, kinship and the value of communal bonds, to what extent this learning made them more open to extended or other relationships beyond the nuclear family, or to what extent they were more willing to behave in ways that are considered non-conformist, marginal or deviant, is open to speculation but defies measurement. Some erosion of cross-cultural boundaries or cultural biases can be seen in volunteers having married inter-racially, or having adopted children of another race, or having adopted homosexual identity, but whether such or other behavior or belief can be attributed to or was reinforced by their cross-cultural experience or education is probable but not provable. If one accepts normative marital status as a valid measure of culturally conforming behavior, then thirty percent of the volunteers deviate from that norm. (A large number of the women have not married - 38 percent or 8/21).

A related question concerns the reintegration of returned Peace Corps volunteers generally. There is no data available on the number of volunteers who have married someone from their host culture (or another culture), married inter-racially, or married another returned volunteer. Yet such marriage patterns may represent ways of reintegrating into the home culture on one's own terms.

This exploration and Ghana One retrospective also leads one to focus on the question of the largest effect, in turn, of returned volunteers institutionally on American culture, what it has been and what it may be. The extent to which returned volunteers have mainstreamed into particular segments of American society has been well documented. The Ghana One volunteers were similar to the majority of volunteers who returned in the sixties in respect to their orientation of careers and graduate education toward public service and education. Returned Peace Corps volunteers are heavily involved in the international assistance network, more than five hundred work for the Agency for International Development (AID) alone, while it was estimated in 1978 that twenty percent of all International Voluntary Service (IVS) personnel were returned volunteers, and in 1980 that forty percent of the Cooperative for American Remittances Everywhere (CARE) personnel were former volunteers.[33]

A separate development has been the growth of pockets and networks of returned volunteers forming either small, supportive groups of people who have had Peace Corps or similar cross-cultural field experience, or joining in more formal voluntary associations of returned Peace Corps (and in some cases other) volunteers, who have served in the same country or of groups of volunteers who have served in various countries but who live in the same geographical areas in the United States. In the mid-sixties, one of these organizations, the Committee of Returned Volunteers, composed of returned Peace Corps and other volunteers, became heavily involved in the protest movement against the Vietnam war. The Committee of Returned Volunteers (CRV) was founded in New York and its original nucleus included several of the Ghana One volunteers. Although it became national in composition, its base of activities remained in New York. There was also an attempt on the part of some of the returned New York volunteers and other groups of volunteers to form a national organization of returned Peace Corps volunteers in 1965 at the first national conference of returned Peace Corps volunteers sponsored by the Peace Corps. In 1965, that initiative by some volunteers and the effort of the Peace Corps to coordinate and direct the interests and energies of the returned volunteers resulted in some controversy and disagreement partially due to political differences and to the suspicions of some that the Johnson administration was interested in co-opting their support for, or at least, diverting volunteers' attention from, its Vietnam policy. The political differences over this issue, the future direction of the Peace Corps and the varying ideas over the goals and responsibilities of the returned volunteer were underscored at this conference called "Citizen in a Time of Change: the Returned Peace Corps Volunteer." While a few of the outside participants from education, business and government expressed disappointment that the volunteers appeared to have few concrete proposals to make for the betterment of American life, the volunteers considered the notion that their two years would bring back some packaged and marketable product one more comment on the gap in understanding about the meaning of the work of the volunteers, their cross-cultural education and the issues that were important to them. For many of the returned volunteers, the foreign policy of the Administration was wrong and the priorities of the Peace Corps were being misdirected.34

A National Council of Returned Volunteers was eventually formed in October, 1979, and a second National

Conference of Returned Volunteers was held in Washington in June of 1981. During the last several years, a resurgence of local volunteer associations has been developing. The goals of some of these groups of returned volunteers express an ethos reflective of their cross-cultural experiences. Observing the returned volunteers today, one is struck by the continuity of ideas and cultural goals: an emphasis on what they gained from working in another culture; an awareness that their contribution, given the opaqueness of economic development, may be very small but nevertheless worthwhile; a sensitivity and respect for and a desire to continue to contact with other cultures and a deep concern for the lives of the people they knew and worked with; a commitment to respect the human rights of those people; and generally a commitment to a policy of non-intervention and continued development of cultural exchange and a better sharing of the world's resources.

The following excerpts from recent letters from two volunteers whose work in the Peace Corps was separated by twenty years illustrated the effects and strength of that cross-cultural education:

> I must say that I strongly believe in the Peace Corps experience - both for the volunteer and the host country national. Because Peace Corps' strength is the freedom it gives volunteers to shape their own experiences, and the emphasis it places in living like the people. I've been convinced while living here that my students do indeed need to learn English. I feel I've been a decent teacher, but something more important went on than teaching/learning English. My students and I have formed strong ties to each other, and I think we've all learned that boundaries are created by people; we are not victims of 'circumstances' or distance as so much of the world seems to believe. Despite our differences in age, color, upbringing, nationality, sex, language - we found there was much we could share and learn. They've had a tremendous impact on me--although I'm sure they'd be incredulous to learn that...and they might not even believe it. These kids are the hope of this country, and there's tremendous potential there.

I hope that what we've learned about communication, prejudice and dignity will go with each of us wherever our dreams carry us.

(volunteer, Upper Volta, 1983)

I have been working in the peace movement, the anti-nuclear movement, the movement against intervention in Central America. Right at this time I am most grateful to the Peace Corps for giving me a sense of reality about how things do and don't occur in underdeveloped countries. Because of our time there, I read papers on Central America with neither the idealism of the left nor the blind cynicism and ignorance of the right. Articles that make agrarian reform, education, or health education sound easy leave me with something of a 'ho-hum'. Articles that label countries communist, Cuba-influenced, Marxist, likewise make me turn away. I recognize the vitality, energy, and originality of these volatile countries. Their revolutions are unpredictable and history bears out slowly their successes, and failures. I can't imagine being able to criticize, compare, and glean information about Central America for example, without the Peace Corps experience.

I like to think that all over the country returned Peace Corps volunteers counteract the tourist mentality that makes 'natives' sound and appear like another species, the 'We-They' mentality that more than any other factor will be the cause of a larger war, and is the cause of the smaller wars. The WE that we experienced as volunteers working with people really quite different from ourselves, is what can save the planet if enough people 'get it'.

(returned volunteer, Ghana, 1961-63)

NOTES

1. Gerard T. Rice, "Kennedy's Children: the Peace Corps, 1961-63," unpublished Ph.D. dissertation, University of Glasgow, 1980, Ch. 1, pp. 1-20.

   Charles J. Wetzel, "The Peace Corps in our Past," the ANNALS, v. 365 (May 1966), pp. 1-11.

   Harris Wofford, Of Kennedy and Kings: Making Sense of the Sixties, New York, Farrar, Straus, Giroux, 1980, pp. 245-6, 253, 255.

2. Wofford, Of Kennedy and Kings, p. 259.

3. Ibid., pp. 262-67.

4. Some of the better known public figures who are former Peace Corps volunteers, for example, Senator Paul Tsongas (D. Mass.) and New York City Council President Carol Bellamy have made several public testimonials to this effect.

5. Fourth Annual Peace Corps Report, June 30, 1965, p. 2.

6. U.S. Congress, House of Representative, Committee on Foreign Affairs, "Peace Corps Act Amendments," Hearings 87th Congress, 2nd Session, 10404, March 1, 6, 7, and 8, 1962, Washington: U.S. G.P.O., 1962.

   The momentum continued. By March 1962, the anniversary of the first year of the Peace Corps, training began for nearly five thousand new volunteers. (Memo from S. Shriver May 8, 1962), and by August the Peace Corps planned on having 4,656 overseas or in training for thirty-nine countries, thirteen of them in Africa (1,342 volunteers), (Memo, Shriver, May 8, 1962). Ethiopia requested and received three hundred secondary school teachers, Ghana requested one hundred additional secondary school teacher, thirty-five technical and vocational teachers, and then fifty adult education teachers. Ivory Coast, the first of the French speaking African nations south of the Sahara to do so, requested seventy teachers. In response to Liberia's request, up to seventy teachers were scheduled to begin there in September, and Nigeria asked for another four hundred volunteers - three hundred and fifty secondary school teachers, twenty-five for an industrial management project and twenty-five university assistants for the University of Ife. Sierre Leone requested a second group of secondary school teachers, seventy started training Summer 1962, and two additional groups were planned for a CARE rural development project and a Medico health and sanitation project. The Ministry of Education in Somali requested fifty teachers and another thirty were scheduled to arrive there in September, requested by the United Nations to work in a public works housing construction project. In addition to the first group of civil engineers, geologists and surveyors who had arrived in Tanganyika in September of 1961, Tanganyika requested thirty nurses. Togo requested fifty volunteers in health projects and teaching, including seven who were to work with a UNICEF vaccination campaign.

7. L. Gray Cowan, "African Reactions to the Peace Corps," Newsletter, Peace Corps Ghana Project, V. 1, No. 2, August 21, 1961, pp. 1-3.

8. Wofford, Of Kennedy and Kings, p.269.

9. Interview with George E. Carter, first Deputy Regional Director for Africa, and Director of the Peace Corps in Ghana, and later Regional Director for North Africa, Near East and South Asia, December 2, 1983.

10. Richard D. Mahoney, JFK: Ordeal in Africa, New York: Oxford University Press, 1983, pp. 185-86.

11. This Month, May 1962, pp. 31-34.

12. Max Lerner, Life, October 16, 1961.

13. Time, November 11, 1961, and December 19, 1961.

14. President John F. Kennedy, Letter, June 25, 1962, Penelope M. Roach, Personal File, Peace Corps and Ghana.

15. Joseph G. Coleman, "A Discovery of Commitment," The ANNALS, V. 365 (May 1966), pp. 12-20.

16. Carter, Interview, December 2, 1983.

17. David Riesman, "Terrifying and Illuminating," Peace Corps Discussion Paper, 1965.

18. "Peace Corps Volunteers' Papers," File, Seventy-Three Items Item 31, "Peace Corps Volunteer Information, 1962-65, Ghana", Smithsonian Institution,National Anthropological Archives.

19. See also, for a largely negative critique of the Peace Corps by two former Peace Corps members of staff, the account by Kevin Lowther and C. Payne Lucas, Keeping Kennedy's Promise, The Peace Corps: Unmet Hope of the New Frontier, Boulder, Colorado: Westview Press, 1978, and the account by a former volunteer, Paul Cowan, The Making of an Un-American: A Dialogue with Experience, New York, Viking Press, 1970.

20. Rice, "Kennedy's Children," pp. 474-75.

21. Ibid., pp. 480, 487.

22. Smithsonian Institution, Peace Corps Environmental Program, 1970-79, Record, Series (1), Peace Corps Volunteers, 1971-79.

23. See: Padraic Kennedy, "Report on Completion of Service Conference with Volunteers, Accra, Ghana, May 30 - June 2, 1963," Peace Corps, December 6, 1963.

Helen Wilson, "Completion of Service Conference, Ghana II (62-01-06), May 26-29, 1964," Peace Corps, January 15, 1965.

Donovan V. McClure, "Completion of Service Report, Ghana II 1/2, III (63-01-02), December 12-14, 1964, Peace Corps, December 24, 1964.

Carl Ehmann, "Completion of Service Conference, Ghana IV, V (63-02-06 and 63-03-07), May 13-18, 1965," Peace Corps, June 4, 1965.

24. "Peace Corps Volunteers' Papers," Item 31, "Peace Corps Volunteer Information, 1962-65, Ghana".

25. Brewster Smith, "Peace Corps Teachers in Ghana," Final Report of Evaluation of Peace Corps Project in Ghana, Peace Corps Contract No. PC-(W)-55, Berkeley: University of California, September, 1964, pp. 144, 149, 120-28.

See also Richard Richter, "Ghana, Overseas Evaluation," Peace Corps, January 6, 1965, pp. 41-42.

26. "Peace Corps Volunteers' Papers," Item 31, "Peace Corps Volunteer Information, 1962-65, Ghana."

27. Robert Lystad, "Ghana - Overseas Evaluation, December 11-20, 1962," Peace Corps, p. 4.

28. Ibid., pp. 24-26, and Appendix 2. See also: Smith, "Peace Corps Teachers in Ghana," pp. 142-43, and Wilson, "Completion of Service Conference, Ghana II," pp. 3-4.

29. Smith, "Peace Corps Teachers in Ghana," p. iii.

30. Ibid., p. 143.

31. Arnold Zeitlin, To the Peace Corps with Love, Garden City, New York: Doubleday, 1965.

32. "Peace Corps Volunteers' Papers," Item 31, "Peace Corps Volunteer Information, 1962-65, Ghana."

33. Fourth Annual Peace Corps Report, June 30, 1965, pp. 41-46. Of 4,545 returned volunteers, nearly one-third were in teaching; of the nearly fifty percent in graduate school, forty-six percent were in social science (including a large group in area studies) and education, and twenty-four percent were in federal, state, local or private public service, and see: Gerard

T. Rice, *Twenty Years of Peace Corps*, Washington, D.C.; Peace Corps, U.S. G.P.O., 1981, pp. 81-82.

34. Ernest Fox, George Nicolau, In "A Time of Change: the Returned Peace Corps Volunteer," Report of the First National Conference. Peace Corps Volunteer, Washington, D.C., March 5-7, 1965, especially pp. 46-55, and 70-76. See also letters, reports etc. from conference, Penelope M. Roach, *Personal File*, Peace Corps and Ghana.

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AN ANALYSIS OF DIFFERENCES IN COGNITIVE DEVELOPMENT IN SELECTED AFRICAN AND WESTERN SOCIETIES

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INTRODUCTION

In this paper, the philosophical, environmental and developmental (Piagetian) models of cognition are examined from an African perspective. The philosophical model relates to the content of knowledge, while the environmental and developmental models refer to cognitive processes. All compare Western and African subjects with a view to finding corroborative evidence for the psychic unity of mankind. The inevitable question is whether any commonality exists among these three models. To answer this question, certain major issues in African cognition are reviewed.

The first section of this paper summarizes the main themes discovered in the review of the environmental studies. To integrate these studies, the factors deemed to affect cognition with special attention to schooling, ecology and cognitive style will be stressed.

The second section will examine the Piagetian studies with special reference to a number of recent critiques of Piaget's theory, especially the work of Brainerd. The studies are divided into those which show a possible qualitative difference and those which show a possible quantitative variation, followed by an assessment of the major trends emerging from the studies in view of the various critiques.

The third section will examine the common features among the cognitive models explored. The possible areas where a folk philosophy could correct conceptual and methodological defects in future studies will be mentioned. It will be argued that underlying many instances of cultural intervention is a particular world view which intrudes on the test situation.

This is followed by a theoretical consideration of the relationship between folk philosophy and empirical psychology. The problems of establishing the relevance of this philosophy to cognition will be mentioned with a view to cognitive similarities which these disciplines discover as they examine the manner in which different peoples organize experience. It will be suggested that psychologists err by maintaining a clear division between cognition and affect when they measure cognitive processes in traditional societies. It is also proposed that the recent tendency of psychologists to emphasize the content of knowledge represents an empirical need to consider affective contributors in cross-cultural concepts of cognition.

In conclusion, an overall review of the findings, their relevance to the theories discussed and possible consequences for future research will be presented.

ENVIRONMENTAL STUDIES: SUMMARY OF FINDINGS

In this section, a broad selection of cognitive processes was examined and their relevance to a variety of African situations explored. Efficiency in cognitive processes was associated with a number of factors, especially schooling, ecology and cognitive style.

Schooling

The most prevalent factor affecting proficiency in various cognitive processes seems to be schooling. Greenfield, Reich and Olver (1966) found that without education, classification ability stopped at age nine. The more education their subjects received, the better they demonstrated mature classification ability and tended to group things by form and function. Scribner (1974), investigating memory ability among the Kpelle, observed that only high school students relied exclusively on taxonomic groupings as an aid to recall. Cole, Gay, Glick and Sharp (1971) had similar experience with a different sample of Kpelle in Liberia, where their educated subjects showed a more efficient memory strategy than those who had never attended school. Doob's (1964) study revealed that the incidence of eidetic imagery decreased with age and education. This result is consistent with the findings of similar studies in the West where children and not adults are usually found to be eidetikers. Pollnac and Jahn (1976) add that it is not the school per se which influences cognitive efficiency but the types of activities which the children learn in school.

These activities develop cognitive processes which are necessary to live in a literate, scientific society. All the theorists and most of the researchers have come from a milieu which is literate and scientific and their tests reflect the psychological correlates of this value system. It is consequently not surprising that schooling is an important factor in tests which measure the acquisition of these correlates because one of the main objectives of schooling is to prepare a population to operate in a scientific milieu. A society cannot be both illiterate and scientific and since the advantages of modern science are desirable objectives for traditional African societies, education on Western lines is a major preoccupation.

However, from the point of view of testing cognitive processes, the value of tests which measure Western acculturation is questionable. In a manner of speaking, the results of such tests involve an ethnocentric, vicious circle. Interpreting results where schooling emerges as a significant factor, it is possible to say that the performance of traditional subjects is poor because they do not demonstrate psychological processes valued in a scientific Western society (taxonomic classification): they are traditional because they are illiterate (Owoc, 1973; Mundi Castle and Okonji, 1976). However, they are illiterate because literacy is not necessary in a traditional non-scientific milieu. These results may be relevant for testing Western scientific acculturation, not for testing basic psychological processes. Thus, education as a factor must be discounted because it reflects a Western scientific bias in the test. What is needed is a closer examination of the context in which cognition takes place with a broader conceptualization of cognitive processes. This approach is seen in a number of the ecological studies reviewed.

Ecology

Cole, Gay, Glick and Sharp (1971), dissatisfied with the performance of illiterate subjects on memory tests, implanted the item to be remembered in a traditional story. They found an increased efficiency in recall because the material to be remembered was organized in a manner which was culturally relevant. Ross and Millsom (1970) used a similar strategy to test the memory of highly educated Ghanians. They compared these subjects with American students who had an equal level of formal education. They found that the Ghanian subjects fared better in recalling stories and hypothesized that this was due to the greater exercise of rote recall in Ghanian society because of the lack of various memory aids which are found in the United States. Segall, Campbell and Herskovits related perceptual tendencies to ecologically valid inference habits. Pollack (1963) went further by postulating a physiological base, related to ecology, for a differential performance by African subjects on perceptual tasks. This hypothesis was supported by the work of Berry (1971) in Sierra Leone and Jahoda (1971) in Malawi.

The overall picture which emerges from these studies is the improved performance of tasks when ecological factors were taken into account. It would appear to corroborate the dictum which Berry (1976) postulated, that people tend to develop cognitive processes which are useful to their particular interaction with the environment. It appears, from the evidence emerging from these studies, that basic process are similar across cultures but the mode in which these processes are employed varies from one ecology to another. It has been proved (Okonji, 1971; Kellaghan, 1965; Price-Williams, 1962) that familiarity with the test material which investigates these processes has a favorable influence on test results. Okonji (1971), for example, could show that with equal familiarity with test materials there was no significant difference in the performance of Nigerian and European children in classification tests. Ecological considerations are so important for cognitive studies that a number of researchers have postulated that they produced a consistent mode of cognitive functioning which they called "Cognitive Style" (Witkin, 1967; Dawson, 1967; Berry, 1976).

Cognitive Style

Witkin (1967) related cognitive processes to the two different modes of identity which characterize literate technological societies and non-literate traditional communities. The global identity of tribal peoples has a number of psychological consequences with the characteristic lack of autonomous functioning. The studies reviewed tried to isolate relevant aspects of socialization in these societies which hamper or foster autonomous functioning. These were found to be related to traditional attitudes of separation, regulation of impulse and personal characteristics of parents. Dawson (1967) found that the Temne of Sierra Leone, who are strict disciplinarians, are more field-dependent than their liberal Mende neighbors. Berry (1971) corroborated the theory by comparing Temne and Eskimos. So did Hudson's studies with blacks in South Africa.

All these studies followed the theory as outlined by Witkin and borrowed his strategies for its empirical investigation with a few minor adaptations. Perhaps this may have several disadvantages. While the theory has interesting and far-reaching possibilities, it appears that the manner by which the theory is investigated tends to guarantee the results which are predicted and hypothesized. It appears tendentious to suppose that a complex concept such as identity, with the multiplicity of factors which contribute to its development (Erkison, 1968), can be defined by the tests which these studies have used (rod and frame, embedded figures, figure drawing, picture interpretation, Koh's block design test).

All these tests involve manipulation of things, abstract paper work or some other skill more commonly found in a literate milieu. Identity, however, is a concept more related to people, a fact which is especially true for African societies. The theory postulates that the ability to discriminate an embedded figure in a geometric design reflects an articulated sense of identity.

This involves an unwarranted exaggeration. The specific rationale for this test design is not clearly articulated by the various theorists who use it. The relation between the test and the theory it is designed to prove is so nebulous and unconvincing that a sense of arbitrariness and circularity can hardly be avoided. Any manipulation of abstract symbols is threatening to people not familiar with this medium.

For example, many literate and highly educated individuals would feel threatened if required to distinguish a hidden letter in a Chinese or Arabic script. This is something akin to asking an individual from an illiterate traditional society to discriminate a hidden figure in a geometric design. Few, if any, of these researchers have tried to investigate philosophically the reasons for a particular self-concept in the subjects they examined.

The concept of cognitive style requires a deeper exploration of the mythology and characteristic philosophy of life through which cognition is filtered and channelled in traditional societies. Kwasi Wiredu (1980), commenting on the problems which a traditional world view presents for Western research, agrees with Horton that these problems arise because many researchers are not familiar with the theoretical thinking of their own culture. He adds, however, a perceptive observation that "a very much more crucial reason is that they have also apparently been unfamiliar with the folk thought of their own culture." (p. 38) It is difficult for Western researchers to appreciate or consider the far-reaching consequences of a folk philosophy which explains everyday phenomena by reference to a prepackaged, given and unquestioned system of beliefs. This accounts for the longevity of these societies and the constant intrusion of culture in empirical research. Consequently, cognitive style may indicate a behavior cluster determined by an acquired identity imposed by tradition in the process of tribal acculturation.

Conclusion

McLaughlin (1976), reviewing cognitive studies in Africa, suggests that they raise more questions than they answer and "a new chaos has been substituted for the old." (p. 87) He lists a number of problems which characterize cross-cultural research in Africa: numerous and elusive variables, inconclusive results, the emergence of cultural factors which require special skills to interpret and a coterie of practical problems surrounding the need for a fair and equal comparison of cultures. These problems are modified by the more recent tendency to multiply comparison groups and integrate experimentation with ethnography. McLaughlin suggests a number of possible generalizations coming from these studies. These include the recognition that all subjects show higher order cognitive processes but differ in the range of situations to which they are applied. Secondly, most studies show that Western education enables literate subjects to generalize solutions to problems and verbalize justifications for the application of operations. Even though verbal fluency is highly valued in many African societies (Wober, 1974), the difference in verbal aptitudes between literates and non-literates can be explained by the fact that literates learn by verbalization in school and non-literates learn by imitation in the traditional society. The kind of learning which is acquired by verbalization is more highly valued in the kinds of tests which literate researchers design to measure cognitive processes associated with literate societies.

From this review, it appears that cultural factors dominate the majority of studies we have seen. Researchers vary in the manner by which they approach these factors. Accepting that situational factors are important determinants of psychological performance, there is the need for an analysis of the ecological significance of stimulation material prior to the application of the experimental treatment. Few researchers have tried to incorporate this approach into their test designs. The work of Cole and his colleagues (1971) provided a novel attempt at this approach when they incorporated recall material into traditional folk tales. Their results gave a much more favorable indication of the underlying capacity when compared with the Western strategies which gave such unfavorable results with the same population.

Cole and Bruner (1971) suggest that this approach involves a reexamination of the distinction between competence and performance. They propose that standard experiments designed to measure competence are blind to the cultural situations to which they are applied. Many of these tests reflect an ethnocentric concept of cognition which interprets differences as defects. This approach assumes that technological success is a reflection of a unique cognitive process and that Western behavior is the yardstick for this technological success.

The results of these tests and the observations of the various commentators all point in one direction. Taken collectively, they suggest an urgent and timely need to examine the context of cognition. An essential ingredient of this context is the ambience in which cognition takes place. Children in Africa, more perhaps than in Europe, acquire and elaborate in childhood all kinds of attitudes, beliefs, manners and the general cultural lore whereby a non-scientific society explains reality. These may not be cognitive skills per se (Flavell, 1978) but they provide the customary context within which cognitive skills are confined and channelled in the course of acculturation.

REFLECTIONS OF PIAGETIAN STUDIES

Critique of Piaget's Theory

Brainerd (1979B) presents a thought-provoking critique of Piaget's theory from a logical point of view. He makes a number of observations which are particularly relevant to cross-cultural Piagetian studies. For this reason, Brainerd's analysis provides a focal point, tying together the various strands in the studies reviewed.

Brainerd begins his critique by asserting that Piaget's stages describe but do not explain behavior. Explanatory constructs, he suggests, must be able to specify target behaviors that undergo change, posit antecedent variables responsible for the change and provide a means of measuring the antecedent variable independently of the behavioral change which it is deemed to effect. Piaget specifies changing behaviors and provides factors responsible for cognitive growth but lacks the ability to measure these factors and the changes they explain independently. Cognitive structures are arbitrary, algebraic abstractions and the criteria to establish their reality involve circularity and measured sequences guaranteed by the nature of Piagetian test strategies. Brainerd suggests that measured sequences occur when each item in a sequence consists of the immediately preceding items plus some new things. Behaviors related in this way can only be acquired and measured by way of invariant sequence because logically it is impossible to devise valid tests for later items which do not measure earlier ones. His argument runs as follows:

> Given two items, A and B, such that B consists of A plus some other things, there are only three possibilities (a) children acquire neither A nor B; (b) children acquire A but not B; (c) children acquire both A and B and A precedes B. But it is inconceivable that some children acquire only B or that some children acquire both A and B but B precedes A. If either finding were observed, we would be forced to conclude that our A measure was prone to false negatives (subjects fail the test even though they have A) or that our B measure was prone to false positives (subjects pass the test even though they do not have B) or both (p. 176).

By definition, universal and invariant sequence of behavior cannot be changed by the environment. If a sequence cannot be changed by the environment, it must be hereditary, involving neurological and hormonal elements which are controlled by the genes. Piaget does not specify these maturational variables and the behavioral sequences with which he is concerned to not always imply concomitant maturational sequences. If the sequence is not in the environment or the organisms, it is frequently found in the test resulting from definitional connections between behaviors.

Flavell (1982), commenting on Piaget's stages, agrees with Brainerd and other critics (Gelman, 1978; Trabasso, Tsen, Dolecki, McCanahan, Riley and Tucker, 1978) and suggests that "it is becoming increasingly certain that the logic-like mental activities suggested by Piaget could at most be but a subset of the ensemble of knowledge, skills and processes needed to solve Piagetian tasks." (p. 8) These various opinions serve to underscore the fact that Piaget is no longer considered the infallible prophet of cognitive development. His theory has also been questioned on theoretical (Greenfield, 1976) and ideological grounds (Preiswerk, 1976; Buck-Morss, 1975).

Many of these criticisms are relevant to the studies reviewed which found a possible qualitative difference in cognitive development in Africa (Bouvet, 1974; Bouvet and Otenin-Girard, 1975; Greenfield, 1966). The results of these studies have been variously interpreted depending on the perspective of each individual commentator to clarify the various issues, these studies will be reexamined for empirical evidence for or against the theory.

Qualitative Differences

Brainerd's observations on measured sequences are particularly germane to Bouvet's (1974) study which she called pseudo-conservation. Bouvet found that children in the seven-to-eight year group showed elementary conservation ability while those in the eight-to-nine year group failed to conserve. According to Brainerd's critique, these results could be explained by the nature of the measurement situation such as the stimulus or response demands of the task, inattention, misunderstanding instructions, semantics or memory limitations. False positive errors could be due to guesswork or produce correct judgements from alternative reasoning processes. This would seem to be the case for Bouvet's young conservers because they could not give adequate reasons based on compensation for their answers. Compensation is a prerequisite for conservation and it is consequently inconceivable within the logistics of the theory that children should demonstrate conservation ability without being able to give compensation reasons for their answers. Bouvet is consistent with Piaget's theory when she designated the behavior of her Algerian subjects' "pseudo-conservation". The invariant sequence criterion precludes any option even though it is obvious that some of her subjects used intuition as an alternative reasoning process. Piaget's theory does not encompass intuition in the test situation. One cannot avoid the suspicion of circularity in Bouvet's "pseudo-conservation".

This suspicion is further compounded by the kind of explanations which Dasen and Heron (1981) give for the incidence of non-conservation ability among adults in Algeria and the Ivory Coast (Bouvet, 1975; Bouvet, et al., 1975). Commenting on these studies, they suggest that non-conservation may be due to methodological problems, the use of standardized tests and linguistic competence. As we have observed frequently in this review, if the behavior is not in the organism, it must be due to a defective test strategy.

Jahoda (1981, p. 116) observed that no society can operate at the pre-operational level, a fact which does not need empirical confirmation and to suggest "that a majority of people are at that level is nonsense almost by definition" (p. 116). However, it is fair to say that only a small proportion of the populations sampled in this review revealed non-conserving adults. These were mostly women in Algeria who tended to use the intuitive method of estimation. This result proved to be a false negative as further investigation of some of these subjects revealed an understanding of continuous quantity even though conservation was not revealed in the test situation.

It is interesting to note that intuition is a designated factor in both of these studies. Greenfield's study, on the other hand, revealed the cognitive implications of a collective value orientation. All three studies emphasized the role of environment either as a factor of cognitive development or as an imposter in the testing situation. If Brainerd's interpretation of Piaget's theory is correct, environment should not play such a central role in matters of cognition. This would seem to be the logical interpretation of a system that claims universality.

The question inevitably arises whether environment affects not only the rate of intellectual development but also the course of development. Brown and Desforges (1976) suggest that this is a very important question because it addresses the problem of accounting for development. It demands that theorists specify the process of development in ways sufficiently clear as to render the specified process available to empirical testing. The work of Bouvet and Greenfield would tend to corroborate the assertion that different educational and societal experiences provide different routes to the same acquisitions. In assessing the significance of their results, Greenfield and Bouvet interpret them to formulate opposite conclusions. Bouvet tends to discuss her findings as a temporary, "pseudo-conservation" which was easily corrected by a few training sessions. Greenfield (1969), on the other hand, concludes that "different modes of thought can lead to the same results.... We have shown how an identity scheme is as crucial to conservation in Senegal as in the United States, but that it can develop by different means." (pp. 244-245)

Brown and Desforges (1979) suggest that the crucial difference in approach consists in the fact that Greenfield's training studies were designed to clearly articulate hypotheses which might account for the discrepancies observed. Bouvet's training study was directed to no particular explanation of the observed difference. She tends to dismiss as irrelevant her results rather than question the theory she has set out to prove. Furthermore, the fact that the discrepancy would be corrected by training sessions does not prove that her subjects would naturally follow this kind of development without the aid of a training intervention. The evidence would tend to favor a conclusion that environment can orchestrate different routes to similar intellectual acquisitions.

Quantitative Differences

Quantitative studies confirm the sequence of development as outlined by Piaget and postulate various factors affecting the age at which these sequences are achieved. Brown and Desforges (1979), agreeing with Brainerd, tend to denigrate the value of these studies as corroborative evidence for the universality of Piagetian stages. Given the manner in which Piaget defines his stages, they suggest that "those cross-cultural studies which claim to confirm Piaget's sequence could be said to have confirmed his definitions of stages, a task their authors could have achieved without leaving an armchair" (p. 89). They argue that most of the studies reveal measured sequences where discrepancies are explained away by methodological problems.

Kamara and Easley (1977) explored a number of methodological problems peculiar to Africa. They tend to attribute the "time lag" observed in cross-cultural Piagetian studies to these methodological problems. If their findings are to be taken literally, then the factors deemed to develop or hinder cognitive growth on Piagetian lines are not really factors of environment but factors of methodology. This position could find support in the results of various training studies which showed a rapid advance in Piagetian cognitive ability (Pinard, Morin and Lefevbre, 1973; Dasen, Lavelle and Retschitzki, 1979). It could be argued that the training experience remedied methodological defects like inefficient communication, contextual cues, unsuitable cultural expectations, familiarity with the task and age determination. Furthermore, it has been shown (Okonji, 1971; Kellaghan, 1965; Price-Williams, 1962) that with equal familiarity with test material, there is very little difference in the cognitive performance of African and European children.

These arguments tend to question the usefulness of environmental factors as corroborative evidence for the stage theory or the "time lag" in development. They do not, however, explain the considerable variation in performance, within the same culture, on Piagetian tasks. This empirical evidence would tend to postulate something more than methodology to explain the consistently divergent performance, corresponding to these factors, which we have observed in this review. Furthermore, cross-cultural studies tend to exaggerate methodological problems which are common to Piagetian studies, wherever they are conducted. Experimenter's instructions and children's responses are open to a wide variety of methodological problems. Equally, contextual cues in any experimental situation can have a telling effect on the experimental outcome. Within the African cultures which we have reviewed, methodological problems would have a generalized effect, yet the test results were significantly correlated with a number of environmental factors. These factors provide a convenient means of identifying special kinds of experience. Piaget (1976) predicts that differing experiences influence the acquisition of cognitive structures. He suggests that the "coordination of actions presupposes multiple systems of auto regulation or equilibration which depend upon the environmental circumstances as well as on epigenetic potentialities." (1976, p. 261)

A number of studies have shown that the schooling experience can affect performance on Piagetian tasks (Greenfield, 1966; Okonji, 1976B; Kiminyo, 1977; Fahrmeier, 1978; Owoc, 1973; Laurendeau-Bendavid, 1977). Poole's (1968) study of Nigerian children found a superior performance by urban children when compared with those who lived in rural areas. Experience is also a factor in the studies which examined familiarity with test material (Pinard, Morin and Lefevbre, 1973; Dasen, et al., 1979; Okonji, 1971; Kellaghan, 1965; Price-Williams, 1962) and the ecocultural relevance of the cognitive operations being tested (Dasen, 1975; Heron and Simonsson, 1969; Brekke and Williams, 1980; Super,1973; Weisner, 1972; Mangan, 1979; Kirk, 1977; Adjei, 1977).

Generally speaking, most of these studies found a significant relationship between some aspect of experience and cognitive development on Piagetian lines. These data are consistent with Piaget's view on the role of experience. What they say about the theory from Brainerd's perspective is altogether another matter. Can we, on the one hand, postulate a universal invariant sequence which, by inference, cannot be changed by environment, while postulating environmental factors deemed to influence the rate of cognitive development? It seems that there is no inherent contradiction in these two if we realize that they are statements about the qualitative and quantitative aspects of the theory.

Summary of the African Piagetian Studies

Dissatisfaction with these results arises from a number of causes.

First, the data, while consistent with Piaget's theory, could equally support other theories of cognitive development including, for example, Bruner's and the behaviorists' profile of development.

Second, the exact details of how environmental factors actually influence cognition have not been satisfactorily explored. Little progress is likely to be made in interpreting the findings of various studies until such time as these rather broad and generally amorphous factors are more specifically defined.

Third, the factor of schooling which appears most consistently related to Piagetian cognition, has a number of detractors (Nyiti, 1976; Kamara, 1971;Kiminyo, 1977; Armah and Arnold, 1977). Most of these researchers are indigenous Africans, who suggest that when certain methodological problems are addressed and various cultural and environmental factors considered, the effect of schooling as an agent on cognitive development is greatly reduced.

Fourth, if we accept schooling as a factor in Piaget's profile of development, we can equally accept it as being consistent with all contemporary theories of cognitive development. Since Piaget's theory developed from a literate, highly technological environment through the observation of individuals acculturated in this milieu, it is not surprising that whatever approximates this milieu will have a concomitant effect on the kinds of development which is valued in this situation. In other words, schooling is an essential ingredient of a literate, technological society and consequently facilitates the acquisition of the skills and processes which are needed to solve Piagetian tasks. It has to be discounted as a factor influencing cognitive processes as it merely reflects a Western ethnocentric bias in Piagetian tasks.

Urbanization is a more nebulous concept than schooling and presents a more difficult problem in isolating the mechanisms of its influence on cognition. Insofar as it approximates a Western technological milieu, it seems to help toward a development which is valued in this society.

The fifth cause for dissatisfaction is associated with the fact that Piaget does not propose a viable strategy to test the significance of anomalies which arise in the test situation. We saw how Bouvet reacted, in what some commentators (Brown and Desforges) would characterize as a typical Genevan fashion, to the unusual sequencing in her Senegalese subjects. Greenfield, on the other hand, generated a new hypothesis which she could test empirically from the anomalies in her study. One wonders if Brainerd is right in assessing circular reasoning in the sequencing criterion for Piagetian stages. The evidence we have explored would tend to support such a position. Interpreting fail responses requires a viable strategy to investigate the significance of contextual cues which may influence or cause the defective response.

The sixth reason for dissatisfaction is associated with these two problems. Most of the studies reviewed encountered the intrusion of cultural factors, which interfered with a clear discovery of Piagetian processes.

Most of these studies found something more than cognitive processes interfering with their investigation of cognitive development on Piagetian lines. Collectively, they provide ample proof of the contextual interpretation of tasks and question the relevance of cross-cultural studies to test the general claims of Piaget's theory. These contextual interpretations could very well point, in one way or another, to the content of knowledge in traditional societies.

These criticisms, however, are not of sufficient gravity as to warrant the abandonment of cross-cultural Piagetian studies. As Dasen (1976) suggests, the data which these studies provide and the differences in cognition they reveal reflect various aspects of culture. These data make a strong point in favor of the strategy adopted in this thesis. As cross-cultural studies multiply, it is becoming increasingly apparent that researchers have to examine the content of knowledge as possible indicators for contextual interpretation.

These observations and the questions they raise have several consequences for cross-cultural Piagetian studies. First, they suggest that inferences about lack of competence in some of the studies are obviously unwarranted.

Second, our results suggest an induced ethnocentrism in both methodology and in the theory. For example, Brown and Desforges (1979) state that "we are asking how well people in other societies can do our problems, when we should be asking how well they do their own problems" (p. 85). This brings to mind the emic and ethic controversy and perhaps the strategy already suggested by Dasen (1969a) may be a first step in solving the multitude of problems which this creates.

Furthermore, it is impossible to assume that a variety of performances are correlated with particular underlying operations. Brainerd has clearly demonstrated the circularity of such a presumption. Given the contextual, conceptual and equivalence problems which cross-cultural studies present, Greenfield's statement that various cognitive processes can be achieved in various ways seems correct.

COMMON FEATURES AMONG THE THREE MODELS

The main purpose of this paper is to explore cognitive studies in Africa in light of selected themes of folk philosophy found in various parts of the continent. The necessity for this investigation is amply corroborated by the studies we have seen and is consonant with the commentaries of the major theorists in the fields (Greenfield and Bruner, 1969; Cole, Gay, Glick and Sharp, 1971; Heron and Simonsson, 1969; Cole and Bruner, 1971). As Heron (1974) suggests, there are values and attitudes implicitly ingrained in traditional African societies which have cognitive relevance.

Basically, this dissertation represents an attempt to find a relationship between what people think and how they think, between the content of cognitive activity and the processes of cognition. In a broader context, it represents a tentative rapprochement to combine the cognitive products of anthropological studies with the cognitive processes of psychological theories.

Ten broad areas can be distinguished where fold philosophy influenced the outcome of test results. It has been demonstrated that this philosophy frequently corroborates empirical test results, explains failure, or parallels in a broader, more abstract way, the theories explored. These areas of commonality can be more clearly summarized by referring selected studies to one or several of the philosophical themes outlined in Chapter Two. We begin with Wober's (1974) study of intelligence in Uganda.

1. Intelligence and Traditional Wisdom

Wober's (1974) empirical investigation of indigenous concepts of intelligence in Uganda resembles the African concept of wisdom as outlined by Kenyatta (1938) and Tempels (1959). Wober (1974) and Kibuuka (1966) found that the notion of intelligence was associated with interpersonal relationships and was characterized by words like obedience, friendly, hot, public, slow, careful, straightforward, safe, happy, healthy and strong. It also includes basic attitudes of respect for elders, hard work and maintenance of the status quo. Tempels and Kenyatta suggest that wisdom is associated with a knowledge of human forces and the orientation of personal conduct to these norms. This involves people knowing their places (in the human hierarchy), having respect for elders and demonstrating good manners and behavior befitting their ages and stations in life. A man who does not live by these norms is considered a fool (kidima). The similarity in these two expressions of intelligence, one philosophical and the other empirical, which come from three different geographical areas (Congo, Uganda and Kenya) is striking. Wober concluded that Western intelligence tests were inefficient measures of this peculiarly cultural value and suggested that researchers should first find the skills developed in a culture and then measure how these are performed.

2. Cognitive Style and Traditional Self-Concept

The work of Witkin (1967), Dawson (1967), Berry (1971) and Hudson (1967) could be greatly enriched by a consideration of African identity as outlined by Tempels (1959) and Taylor (1963). When describing a global cognitive style, they suggest it is characterized by a limited self-identity, massive repression and denial, with a poor awareness of being different from others. These characteristics are hypothesized to develop from a "socializing cluster" which hampers or fosters autonomous functioning. While these observations are perceptive and generally reflect African cultures, they seem to be superficial and incomplete. Several questions remain unanswered. If there is a massive repression and denial in a society, this should be reflected in strong impulse control not, as the theory suggests, in impulsiveness. Impulse control is associated (by the psychoanalysts) with the formation of the ego which, in turn, is related to cognition and individual identity. The ability to tolerate frustration is associated with early intrafamilial interaction. As Taylor has outlined, many Africans in traditional societies have a ready-made identity, tied vertically to an ancestor and horizontally to the family and clan from which he came. Mbiti (1969) puts this another way when he says "to be human is to belong to the whole community....a person cannot detach himself...from the group of those who make him aware of his own existence." (p. 2) Identity, therefore, in traditional African societies, is not so much a product of the individual's experience but is given, through ritual, in the process of acculturation. It is not so much a process as a product of the individual's environment.

Impulse control is also dictated by philosophical lore, since emotion can be considered as a part of self, reaching beyond the confines of the individual person and affecting the harmony and well-being of others. To say that African traditional societies are characterized by poor impulse control reflects a superficial understanding of behavior in this milieu and the philosophical folklore which orchestrate the channelling of impulse. To say that a society has massive repression and denial, while postulating poor impulse control for the same society, involves an inherent contradiction. Repression, however, does result in the widely recorded incidence of "running amok" in many African traditional societies (Shelly and Watson, 1936; Laubscher, 1937; Aubin, 1939, 1952; Dembovitz, 1945; Gelfand, 1947; Carothers, 1948, 1953; Gallais and Plaques, 1951). Explanations for this behavior range from the bizarre to the highly serious. The psychoanalytic explanation would relate this phenomenon to repression and denial because where extreme emotions are taboo, they are seldom available to the conscious ego for modification and refinement. They remain in their purely primitive state and when they erupt, they show all of the ferocity of an untrained, unfettered id impulse. However, such incidences of insane emotion are the products of a value system which generally condemns these emotions because of the discord they cause in human relations. In this context, "cognitive style" is an instrument in the service of cognitive content, an expression of a culturally designated system of control with its own particular rationale in the values of the community.

3. Personal Idiom and Traditional Causality

The work of Robin Horton on causality in traditional African societies clearly parallels many themes seen in African traditional philosophy. He emphasizes the role of a personal idiom as a diagnostic strategy in Africa. A personal idiom can only be understood by references to the folklore which gives it credibility and universal acceptance. It is related to Tempel s concept of vital energy and the norms for its practical application by mortals in a particular situation. It is also related to Taylor's notion of multiple souls and the mechanisms by which they can be influenced from outside the individual. The personal idiom is especially a product of the harmony which folk philosophy sees in the whole spectrum of reality, where everything has a designated place according to its particular share of vital force. Horton's paper parallels the philosophy in other ways, most notably in his treatment of the magical power of words, dual etiology for illness, use of language to refer obliquely to forbidden things and the poor development of the notion of coincidence.

4. Object Permanence and Dynamic Process

The criticism of Piaget's theory by Buck-Morss (1975) is particularly relevant to Taylor's observation that Africans have a well-developed sense of presence. According to Buck-Morss, the Piagetian value of developing in children the notion of permanent object, space and time, involves the ability to divorce subject from object and to perceive reality without the social and human considerations which are an essential part of an African's perception. An empirical study by Cole and his colleagues (1971) in Liberia clearly demonstrates the need which African subjects have for contextual information when faced with logical problems. When confronted with a logical sequence, one subject protested that he could not know the answer because he was not present when the postulated event took place. Commenting on this phenomenon, Cole and Scribner (1974) concluded "what we have encountered among people in traditional societies is a refusal to remain within the boundaries of the problem presented by the experimenter." (p. 168)

It is difficult for an individual, steeped in traditional lore, where every aspect of reality has a designated place in the hierarchy of things, where all events and things are interrelated and where the notion of accident is generally not accepted, to thrive in a Piagetian system which reflects a social structure where reification and alienation govern production and exchange. The reification of commodities refers to the marketplace, where things are cut off from the transforming activity of their production. Possessions, in the traditional African societies, are personalized insofar as they are symbols of the owner's vital force. As Taylor (1965) puts it, "possessions may be regarded as imbued with the selfhood of their owner." (p. 96) They have consequently a value far exceeding the price tag of the marketplace. Tempels corroborates this point when he cites the case of a chief who, when his dog had killed a neighbor's ewe, made proper restitution by returning three sheep and one hundred franks to make up for the insult to the victim's vital force (p. 96).

If Piaget's theory reflects the values of a Western capitalistic milieu as Buck-Morss suggests, then it presents contextual problems for people in traditional societies accustomed to seeing a continuous and vital nexus between things and the processes which brought them into being.

5. Individualism and Collective Value Orientation

This conflict is especially apparent in Greenfield's (1966) study. She found that the performance of her subjects reflected a number of cultural factors which originated from their peculiar world view. This represents a collective value orientation which is often substituted for object reality. We are reminded of the protocol of language in her observation that questions tapping the individual's opinion, as individuals, were seldom given. When she changed the manner of questioning to a more general approach, correct answers came spontaneously. The hierarchy of human beings is corroborated in the tendency of her subjects to attribute magical powers to the action of adults. She characterized her subjects as lacking self-consciousness, an observation consistent with Taylor's profile of identity in traditional African cultures. This reflects a lack of a sense of individuality and, as her subjects tended to confuse their own thoughts, statements about something and the thing itself. One wonders if this is not a reflection of a belief in the magical power of words.

6. Conservation and the Hierarchy of Being

This aspect of folk philosophy is especially apparent in Kamara's and Easley's translation of euphemistic speech. Certain topics cannot be referred to directly and usually receive an oblique reference by the use of euphemisms. The hierarchy of human beings is reflected in the observation that non-conservers gave cultural reasons for their answers. One particular example cited by Kamara is particularly germaine. One subject, with a volume of rice which had been equally shared with his friend, suggested that his friend had more because he was older. This was an answer culturally dictated and totally independent of perceptual reality. It also reflects a value system where an older human, because he is older, is justly given a larger share, for that is his legitimate right because of his greater vital force. The observations of Kenyatta on tribal respect (1949) are corroborated by Kamara's (1977) discovery that children, in the presence of adults, are inhibited about conclusions which they reached independently. Tribal manners and respect for elders and the general protocol of language would dictate a respectful silence even though they may know the right answer. This influence was also postulated by Kiminyo (1977) and Owoc (1973) to explain the relatively poor performance of non-schooled, and therefore more traditional, children in conservation tasks which require initiative and autonomy.

7. Science and Magical Causation

One of the few studies which have directly addressed the problem of eliciting magical explanations for conservation tasks was designed by Laurendeau-Bendavid. She found that the explanations given for the movement of clouds were generally linked with coincidental phenomena. Such explanations were rarely, if ever, given by a comparative group of Canadian children. In the definition of life tasks, the Rwandese children tended to related life with good health, well-being, living without illness, observations which are consistent with Tempels' notion of vital force.

8. Perceptual Flexibility and Magical Reasoning

Furby (1971) proposed that the confusion surrounding test results in Africa can be explained by reference to magical reasoning and the degree of perceptual flexibility in a given environment. Furby notes that in traditional African societies "unobservable being and forces are not at all foreign to his (the African's) way of thinking and therefore his reasoning is not based on empirical observation alone." (p. 247) The conservation of identity is consequently a difficult concept for children in traditional cultures because, as we have seen in the philosophy of vital force, a thing can be itself while maintaining a meaning which transcends its observable identity. A sacred tree, for example, can be a tree, while maintaining the primary cultural designation of being a medium for the vital force of the ancestors. This could also be a contributory factor explaining the observed "time lag" for the performance of African children on tasks which require conservation of identity. Mangan (1978) similarly postulates that the mythicomagical perspective has a negative influence on conservation tasks.

9. Empirical Tests and Cognitive Ambience

The work of Heron and Simonsson (1969) and Heron (1974) suggest the need for a closer look at the ambience within which cognition takes place. This involves exploring the taken-for-granted assumptions about what is and is not important in life. This basic philosophy is reflected in values with cognitive relevance, implicit in the total pattern of life. These values are absorbed in the process of acculturation by imitation and the performance of ritual. As Kenyatta (1949) and Tempels (1959) suggested, these values are available to all members of traditional societies and often taught by way of manners and expected behavior in a given practical situation. The "ambience" approach has found corroboration in the work of Cole and his colleagues among the Kpelle of Liberia. These researchers observed that a whole cluster of behaviors relating to interpersonal interactions needed to be explored with a broader and more liberal concept of cognitive development. It involves taking a closer look at the learning environment of the young child, with a view to isolating factors which influence cognitive development. Adjei, for example, hypothesized that early environments, where superstition was deemphasized, contributed greatly to the better performance of urban children in Piagetian tasks.

10. Test Behavior and Tribal Manners

In this thesis a number of studies found a significant correlation between their findings and a variety of environmental factors. It might well be argued that some of these factors relate to folk philosophy as it orchestrates behavior and procedure in practical situations. Since the philosophy was gleaned from a multiplicity of individual acts, its application to life must influence an equivalent number of practical situations.

Goldberg (1972) found that Zambian children were passive, a fact she attributes to early learning of obedience. The necessity of this obedience is related to the hostile African environment. It may also reflect a value system that accepts obedience as a taken-for-granted and necessary fact of life.

Mundi-Castle and Okonji attribute the superior performance of European children in the handling of objects to the tendency in early African training to emphasize personal relations more than the manipulation of things. A similar observation was made by Zempleni-Rabain (1970) in her work among the Wolof of Senegal. Both of these studies find corroboration in the profile of traditional Kikuyu education outlined by Kenyatta above. All reflect a value system where obedience is presumed because of the superior ontological status of those who hold authority. This, in turn, is related to the hierarchy of being and the philosophy of vital force.

From this brief view of the studies explored in this thesis, it is obvious that cultural factors play an important role in the general performance of traditional Africans on empirical tests of cognition developed in Europe. Generally, it corroborates Dasen's (1975) assertion that cross-cultural studies on cognition have shown that "cultural factors are more important than had previously been hypothesized." Horton (1967A and B) goes further and proposes that the alleged difference in cognition which is frequently observed represents misinterpretations of assertions based on African traditional beliefs. While we would not be prepared to accept Horton's proposal uncritically, we have clearly demonstrated that much of the confusion surrounding empirical results in Africa can be explained by reference to an underlying world view. We agree with Horton (1967) and Wiredu (1980) that many misunderstandings could be overcome if researchers were familiar with the theoretical and folk thinking of their own cultures. Thought does not take place in a vacuum but within the total context of a particular society. Wiredu suggests that both European and African thought processes emanate from a broader and more prevalent folk philosophy. The task of relating this philosophy with cognitive theories which describe the process of cognition is not without its own peculiar cluster of methodological, theoretical and procedural problems. We will not examine our thesis with respect to some of these problems.

FOLK PHILOSOPHY AND ITS RELEVANCE TO PSYCHOLOGY

Price-Williams (1980) gives an excellent account of the problems involved in the synthesis of anthropological products of cognition and the cognitive processes of psychologists. He begins by outlining a number of differences which characterize the two approaches to cognition. Anthropologists have been more concerned with belief systems, values, various forms of classification and the general content of thought. They are content to observe how groups of people organize their culture without generating a general theory of cognition. Psychologists, on the other hand, operate from the perspective of a particular theory as it applies to individual populations to determine the universality of cognitive processes. In recent years, both disciplines tend to abandon the early polarization which characterized their respective approaches to cognition. Anthropologists have suggested theories on cognitive styles, conceptual styles or modes of thought (Horton and Finnigan, 1973). These theories tend to specify ways of organizing the world of experience, of putting things in a certain way, of looking at the world in a distinct fashion. They also tend to include in the concept of cognition a consideration of affective contributors. Price-Williams suggests that this provides a category problem which is very difficult for modern psychologists to accept. He notes that since the time of Kant, the history of psychology has been marked by a clear division between cognition and affect. The observed lack of this division in traditional societies made Levy-Bruhl (1923) postulate for them a different type of mental operation which he termed "prelogical." This problem is compounded when a language system which combines these two has to be considered in a test situation. Language equivalence is a necessary but difficult quality to achieve. We have outlined in Malone (1984) various characteristics of a traditional, as opposed to a scientific, mode of thought. Horton (1967A) has shown that the cognitive processes underlying these two modes are basically the same. We have also seen other attempts by Tambiah (1973) by using analogy and Levy-Strauss (1966) classification. Both of these theorists could isolate similar cognitive processes when they compared the use of myth and analogy in Western and traditional societies. Several controversies surround these studies but they serve to demonstrate the fact that cognitive process and cognitive products are somehow related. Levine (1963), Jones (1971) and Wallace (9170) have all tried to describe this relationship in different areas of cognition. It is becoming increasingly evident that the products of thought affect the process. This is reflected in the recent tendency of psychologists to stress the context and situation of cognition. Cole and his colleagues (1971) suggest that "cultural differences in cognition may more nearly reflect changes in the situations to which various cognitive skills are applied, than they do general processes." (p. 226) For a proper exploration of context, it is necessary to find out the various steps which link the various premises of a culture together. As Bateson (1958) puts it "from the examination of the premises in the structure of a particular culture we can fit them together into a coherent scheme and finally arrive at some general picture of the cognitive processes involved." (p. 33) This suggestion provides a challenge to cross-cultural cognitive psychologists. It has a number of parallels with Wallace's (1961) notion of "mazeway." By mazeway, Wallace means "the meaningfully organized totality of learned cognitive representations of people, things, processes and values held at a given time by an individual." (p. 139)

Wallace suggests that the totality of what has been learned is common to many members of a social group, giving equivalent meaning to the experiences they mutually share. Both Bateson and Wallace presume a cognitive organization which is linked with non-cognitive elements in culture. Price-Williams suggests that the independent variables of cross-cultural cognitive research may very well be those non-cognitive elements. He notes a number of points of convergence between the product of cognition and its process. One common ground is the new emphasis on context. The relationship of communication to cognition is another which has been explored by Cole (1975). Price-Williams concludes by saying that the main lesson which anthropology teaches on cognition is "that the cognitive realm of individuals is substantially greater than that explored by the odd experiment. The tapping of this wide world presents difficult challenges to the methodological ingenuity of the psychologist." (p. 179)

FINAL COMMENTS

It is obvious from what we have said that the word "context" recurs like a leit-motif throughout this paper. The combined effects of experimental psychologists and anthropologists in the field tend to converge on this point as a possible launching pad for further cooperation. This provides a novel challenge to psychologists to modify the complacent ethnocentricity of their earlier conceptualizations and borrow from the work of anthropologists for the betterment of all.

This involves, among other things, taking a closer look at the content of knowledge in traditional societies where experimental tests take place. This is only a part, but, we may add, an important part of the term "context." It also involves considering a variety of ecological factors such as subsistent style, degree of differentiation, autonomous functiong, family interaction and early training strategies. We contend that these factors reflect, in one way or another, a more general philosophy of life. It is obvious that these factors have not been sufficiently addressed in the past. Our review has shown a growing urgency on the part of cognitive commentators that the problem of context be comprehensively examined prior to the application of any experimental design.

Another consequence of the new emphasis on context is the need to deemphasize the role of factors like schooling, urbanization and contact with Europeans as indicators of cognitive processes, since these reflect a Western scientific bias in the construction of tests. We have seen that more culturally related factors like ecology, cognitive style, cognitive ambience and familiarity with test material have a considerable influence on general performance in the tests. However, this is just another aspect of the same problem. The educational factors enable better performance because they develop skills valued by the test, the ecological factors have a similar effect because they neutralize test bias by relating the test to the ambience of cognition. In one instance, we improve the actor and in the second, we improve the script.

Our results also show the need to relate more clearly the various tests to the cognitive processes they are designed to measure. We have noted a number of instances of circularity in both the tests and the theory of cognition as designed by Europeans for traditional societies (Piaget, Witkins and the tests which favor urbanization, schooling and contact with modernizing influences). A number of anthropologists have avoided this pitfall by designing a broader conceptualization of cognitive processes based on a better understanding of conceptual thinking in their own scientific environments (Levi-Strauss, Tambiah and Horton). This involves, on the one hand, broadening the conceptual base of empirical tests so as to neutralize Western bias and, on the other, to get a better understanding of the functions of thought as they relate to various kinds of experience. One obvious way of achieving this is to integrate experimentation with ethnography. It may also involve a reexamination of the folk philosophy of Western societies.

In a brilliant essay entitled How Not to Study African Thought, Kwaku Wiredu distinguishes traditional and scientific thinking. He suggests that in order to have a fair comparison of African and Western thought, you should compare the folk philosophy of these major groups. It seems arbitrary and unfair to compare the scientific thinking of one group with the traditional thinking of another. These are two distinct modes of addressing the environment which tend to be mutually exclusive. Education and science tend to destroy tradition and the ancillary philosophy which sustains it.

Africa is in a state of rapid transition and the process of modernization is quickly corroding the traditional ways of understanding experience. Most of the tests we have seen have tended to select the more traditional areas since they provide a natural laboratory for investigating the role of such ethnocentric factors as education, urbanization and contact with modernizing influences. This, according to Wiredu, is an unfair comparison.

Wiredu is one of the numerous indigenous intellectuals which our review has considered. We have seen the many valuable and perceptive suggestions which these Africans have brought to the comparison of cultures. Some are philosophers (Mbiti, Wiredu and Kagame), others are novelists (Tutola and Leye) and the majority are directly concerned with the problem of cognition in their own cultures (Kamara, Nyiti, Okonji, Kiminyo, Kibuuka). All point to the need for a closer look at the context of cognition and provide useful and perceptive reactions to the study of cognition in African cultures. Generally, they tend to argue for the psychic unity of mankind, and, by inference, agree with Horton that differences in performance reflect misinterpretation of context.

We have also shown that the Piagetian theory of cognitive development may require modification to incorporate the possibility that environment can orchestrate different routes to similar intellectual acquisitions. Generally, the majority of studies confirm the universal nature of the hierarchical stage sequence. We have noted a number of discrepant studies, but conclude that because of the problems surrounding cross-cultural studies in general, these results are difficult to interpret satisfactorily. It would appear that the necessary sequence may not be an empirical issue but may be a consequence of the definitions of processes as outlined by Piaget. If this is the case, then empirical studies can only reveal the designated sequence. Discrepancies in this instance can only be attributable to problems of method or performance variability. However, the studies have clearly shown that cognitive content, in the guise of "action magic" or intuition, has influenced the results in a manner which cannot be easily explained away.

We need to know more about the manner in which tasks are interpreted to be able to assess discrepant performance.

The overall impression emerging from this study is the conviction that we have reached a point in time when cross-cultural research can no longer ignore the relationship between cognitive content and cognitive process. All the studies we have reviewed and the major cognitive commentators we have seen point in this direction. If future research continues to ignore this direction, we are destined to wander aimlessly in the quagmire of confusion which is said to characterize the present state of cross-cultural cognitive research.

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LANGUAGE AND DEVELOPMENT IN EASTERN INDONESIA*

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INTRODUCTION

The Eastern Islands Agricultural Education Project (henceforth, the `Project') is a cooperative project, bringing together Washington State University, U.S.A.I.D., the Eastern Indonesian Association of Universities (Badan Kerjasama Antar Perguran Tinggi Negri Indonesia Begian Timur [known acronymically as BKS]), and the Government of Indonesia for a five year project which began October 15, 1979 and will end on June 30, 1984. The goals of the Project are:

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> ....to increase the effectiveness of [the BKS], and through [the BKS] to upgrade the agricultural and supporting programs of the member institutions. This will enable the member institutions to provide the leadership and trained manpower for agricultural research and extension activities needed in the rural development of eastern Indonesia.

These goals are being accomplished through the input of technical assistance, training of current faculty members, and improvement of instructional materials. The impact on development should be increased employment and income levels in the eastern islands along with increased food production-consumption capabilities for the rural poor.

> The primary focus of the project is in agriculture, but includes essential support services. . . . Efforts to upgrade programs include:
>
> 1. work with curricula;
> 2. improvement of teaching methods and materials;
> 3. use of experiment stations for teaching as well as research;
> 4. improvement of libraries and laboratories;
> 5. design of package courses;
> 6. faculty development (including advanced degrees);
> 7. upgrading research and public service centers to serve regional needs. [Annual Report, 1/1/82-12/31/82, EIAEP].

This paper discusses the effects of English as a foreign language and related sociocultural issues in the graduate education of Eastern Indonesian scholars who were enrolled in M.A. and Ph.D. programs at Washington State University in 1983-84. As the English language advisor for Washington State University's Eastern Islands Agricultural Project, I have discussed language-related educational difficulties with the Indonesian professor at Hasannudin University, Ujung

Pandang, South Sulawesi, who was responsible for English language training at BKS universities, and observed and participated in an intensive pre-TOEFL English course at Tadulako University, Palu, Central Sulawesi.

There have been 35 Indonesian scholars enrolled in graduate programs at W.S.U. during the Project; however, when this research began there were fewer than 35 Indonesian scholars on campus. With the aid of my research assistant, 23 Indonesians who were enrolled in graduate programs at W.S.U. in March 1983 were interviewed personally, and 19 of these people later completed a language and education questionnaire. In addition, W.S.U. faculty who served on the graduate committees, or who have had Indonesian scholars in graduate courses were interviewed. Data from structured interviews and questionnaires are the basis of this paper.

LANGUAGE-RELATED EDUCATIONAL PROBLEMS

Indonesia is a country of extreme linguistic and cultural diversity. Although English is its first official foreign language, it is not part of the linguistic repertoire of a large percentage of Indonesians. Although a majority of Indonesian scholars at W.S.U. studied in one or more formal English courses in Indonesia, they all experienced a variety of language-related obstacles in their graduate educations.

I shall begin by discussing two categories of educational problems, Administrative Procedures and Verbal and Literacy Difficulties, and then discuss cross-cultural issues that affected the graduate education of Indonesian scholars.

Administrative Procedures

Indonesian scholars experienced difficulty with university and course procedures. When they were asked to complete the statement, "The most important difference between the Indonesian and American education system is __________," they usually replied: "the system." This includes a number of issues. For example,

1. students were confused frequently by pass/fail options, and the mechanics of dropping a course;

2. students were confused by course procedures such as due dates for assigned course work, and many students did not realize that professors held office hours when students could meet with them at the option of the students;

3. students were unfamiliar with the American grading system that uses ˋA', ˋB', ˋC'. and so on, along with the qualitative criteria of evaluation incorporated in this system.

Literacy Difficulties

A sample of language data obtained from 19 questionnaires is summarized in Table I and Table II. Tables I and II when considered together provide a ˋlanguage profile' for each Indonesian scholar who completed a questionnaire; the data are organized according to RESPONDENT NO.

Table I indicates TOEFL score achieved in Indonesian prior to leaving for the United States, Time of Residence in the United States, Grade Point Average as graduate students at W.S.U., and the languages spoken natively by each respondent in addition to Indonesian and English. Indonesian scholars were admitted to W.S.U.'s graduate school with a minimum TOEFL score of 450.

Based on the data in Table I, there is no strong correlation between TOEFL score as a measure of English language skills, such as verbal/reading comprehension and writing ability, and GPA; Respondent No. 2 with a 463 TOEFL had a 3.48 GPA, while Respondent No. 6 with the TOEFL score of 613 had a 3.22 GPA. A hypothesis suggested by Indonesian scholars during structured interviews correlated grade point average with major field of graduate study. The suggested hypothesis was: Indonesian scholars who majored in agricultural subjects, engineering, and the pure sciences had fewer language-related difficulties than scholars who studied social sciences, such as sociology and anthropology; thus their GPAs were higher.

TABLE I

LANGUAGE AND EDUCATION DATA

RESPONDENT NO.	TOEFL		GPA	
No. 1	497	Adult & Community Education (ACE)/hort.	3.34	Manadonese; Dutch
No. 2	463	Sociology	3.48	Indonesian Only
No. 3	513	Food Science and Technology	3.08	Makassarese; Buginese; Spanish
No. 4	460	Sociology	3.31	Javanese; Sundanese
No. 5	473	Forestry/Ag Ec	3.31	Javanese; Sundanese; Banjarese; Japanese
No. 6	613	Structural Engin	3.22	Dutch
No. 7	547	Wood Technology	3.07	Dutch
No. 8	473	ACE/For Ran Mang	3.31	Javanese; Sundanese Banjarese; Japanese
No. 9	477	ACE/Agron, Soils	3.35	Indonesian Only
No. 10	480	Ag Econ	3.06	Mandonese
No. 11	463	Pharmacy	3.18	Makassarese
No. 12	467	Forestry/Soils	3.11	Javanese
No. 13	493	Educ Measurement and Eval/Ed Admin	3.48	Dutch
No. 14	463	Linguistics	3.00	Indonesian Only
No. 15	543	Mech Engineering	3.18	Dutch
No. 16	480	Adult Educ/Stat	3.77	Dutch; German
No. 17	468	Anthropology/history	3.18	Dutch; Javanese
No. 18	517	Curric/Media	3.60	Torajanese
No. 19	489	Chemistry	3.30	Makassarese

TABLE II

ENGLISH STUDIED IN INDONESIA

RESPONDENT NO.	TOEFL	NO. OF CRS	DURATION	CLASSROOM TIME	WORK OUTSIDE CLASS
No. 1	497	3	1. 2 mns	8 hrs/day	2/3 hrs/wk
			2. 6 mns	2 hrs/wk	
No. 2	463	1	3 months	8 hrs/day	2 hrs/wk
No. 3	513	4	1. 4 mns		
			2. 1 yr		
			3. 4 wks		
			4. 2 mns	3 hrs/wk/crs	5 hrs/wk
No. 4	460	none			
No. 5	473	1	8 weeks	8 hrs/day	2 hrs/day
No. 6	613	none			
No. 7	547	2	8 weeks	2 hrs/day	3 hrs/wk
No. 8	473	none			
No. 9	477	1	16 weeks	--------	------------
No. 10	480	Many	1 yr, Univ.	2 hrs/wk	
			7 yrs, SMA/P	4 hrs/wk	1 hr/wk
No. 11	463	2	3 months	3 hrs/wk	1 hr/wk
No. 12	467	3	12 weeks	6 hrs/wk	1 hr/wk
No. 13	493	5	8 weeks	3 hrs/dy	none
No. 14	463	1	10 months	90 min/day	2 hrs/wk
No. 15	543	1	4 weeks	6 hrs/day (w native spks)	------------
No. 16	480	1	4 months	1 hr/wk	"almost never"
No. 17	468	1	2, Univ.	2 hrs/wk	
			yearly, SMA/P	2 hrs/wk	1 hr/wk
No. 18	517	0	5 days only		
No. 19	489	1	16 weeks	1 hr/wk	2 hrs/wk

A correlation of GPA and MAJOR field of graduate study with TOEFL scores for the respondents does not seem to substantiate this hypothesis. For example, Respondent No. 2 had a 3.48 GPA in sociology and a TOEFL score of 463. GPA was affected by many variables such as: using a tutor; quality of tutorial assistance; frequency of tutorials; professional grading procedures; and the extent to which an editor assisted an Indonesian scholar in the preparation of his/her research papers.

Table II summarizes the English language course histories for the 19 respondents. Note that Respondent No. 6 who achieved the highest TOEFL score reported no formal courses in English; rather, data obtained in the structured interviews indicate that this individual made an effort over many years to place himself in social situations in Indonesia where English was being spoken, for example, between Americans and/or Australians. Qualitative data indicate that English language courses in Indonesia did not emphasis speaking abilities and the comprehension of spoken English. Only Respondent No. 15 reported the use of native English speakers as part of his English language course in Indonesia.

English grammatical structure was a serious barrier in the Indonesians quest to read and write English. When Indonesian scholars were asked to complete the statement, "The most serious language problem I encountered in graduate study was __________," they responded with: "listening"; "writing"; "tenses and articles"; embarrassment to speak in class"; and writing exams in time.

Problems with English grammar were serious and focused on fundamental differences between Bahasa Indonesia and English. For example, Bahasa Indonesia lacks:

1. plural forms;
2. articles;
3. subject-verb agreement; and
4. complexity in personal and demonstrative pronouns.

Difficulty in mastering basic English grammar established a situation in which Indonesian scholars found it arduous and perplexing to understand lectures, interpret textbooks, journal articles, and to write scholarly term papers, theses, research proposals, and dissertations. Moreover, Indonesian scholars were unaccustomed to the responsibility of 'homework'; that is, reading and writing assignments outside of class since as students in Indonesia they were not assigned homework on a regular basis. Work outside class' that was part of English language courses taken in Indonesia is noted on Table II.

Problems with reading comprehension and in the preparation of acceptable scholarly writing according to American academic standards, in terms of both form and substance, is a problem for all Indonesian scholars. Indonesian scholars in the social sciences,humanities, and education reported not being accustomed to the 'scientific method.' Problem-oriented research papers caused them endless difficulty since they were more comfortable with expository writing. Further complicating this situation is their unfamiliarity with rules of American scholarship which strictly disallow copying copious quantities of published material without proper citation.

Additionally, Indonesian scholars reported an unfamiliarity with technical vocabulary in their respective fields of study, especially in agriculture, engineering, and the sciences. They reported that their formal training in Indonesia did not prepare them adequately for their respective graduate programs at W.S.U. For example, students were unprepared to use laboratory facilities and equipment at W.S.U. since these were more elaborate and sophisticated than those available in Indonesia.

CROSS-CULTURAL PROBLEMS

Serving as the matrix within which these administrative and literacy difficulties take shape, are contrasts between Indonesian and American culture which affect the educational process. I shall now present a summary of three cross cultural issues affecting the graduate education of Indonesian scholars.

1. Indonesian scholars dislike overt and intense competition in the classroom; when these nonaggressive individuals are pushed into competitive situations, stress, tension, and anxiety is the result. This situation is exacerbated by their inability to perform in English as well as they feel they should perform.

2. Indonesian graduate students at W.S.U. are scholars in their home country. As a professor in the Indonesian university system, they had earned the respect of their countrymen, colleagues, and students; however, when they became graduate students, their new statuses and roles contrasted sharply with their social situation in Indonesia. The result was a sense of interference between the two contrasting systems.

   For example, Indonesians scholars are reluctant to approach a professor during his/her office hours; in Indonesia students either rarely meet with professors outside of class, or meet with professors at the instructor's convenience to discuss their progress in his/her course. In one reported circumstance, an Indonesian took 'full' advantage of his rights as a student; in this case, a vice president of an Indonesian university asked for and received copies of a professor's lectures, and copies of the lecture notes of a guest speaker.

   Several Indonesian students reported calling a professor at home only after they had been instructed to do this by their department secretary. The students felt a strong sense of intruding on a professor's privacy, and many of them had minimal contact with their professors. This self-imposed isolation exacerbated the Indonesians' feelings of social and academic marginality in the English speaking university community. This had two effects:

   A. Indonesians banded together and failed to practice English as frequently as they should have with native English speakers, and their verbal abilities improved slowly. This verbal isolation was reinforced by the Indonesians' opinion that the casualness of American students was unfriendliness generated by 'something' the Indonesians had said or done; and

B. Indonesians who had substantive problems in courses did not request assistance, and their situation worsened. When students found themselves in trouble in a course, they were reluctant to drop it or to receive an incomplete; these were unacceptable alternatives for the Indonesians as this was a sign of `quitting' and this was a nonviable option for them.

3. One of the serious sociopsychological difficulties faced by Indonesian scholars was separation from their children and/or spouses. Some men were forced by financial pressure to leave their wives and children in Indonesia for a year or more before they could afford to join them in the United States. In one notable case: a man left his wife and children in Indonesia for a year while studying at W.S.U.; after a year, his wife and children came to Pullman and she enrolled in a graduate program; after living together for one year, he had to return to Indonesia, leaving his wife alone in Pullman with two children for an additional year.

A common pattern for Indonesian families is to leave one or more children behind in Indonesia. Table III summaries the residence patterns and ages of children who have one or both parents enrolled at W.S.U. It is significant that in the questionnaire sample of 19 Indonesian scholars, 10 to 14 families with children had one or more children living with family members in Indonesia. Leaving one or more children in Indonesia is a financial necessity for many Indonesian scholars and their families; however, the social and psychological consequences of this necessity combine with the academic demands of graduate school to produce stress, anxiety, and tension for many Indonesians. These pressures are expressed in symptoms of alcoholism, depression, neglect of academic responsibilities, and reluctance to exceed the social boundaries of the community of Indonesian scholars and their families.

The Indonesian scholars are well aware of these problems; however, their social isolation in the university community helps keep these problems from public view, and their reluctance to share these difficulties with Project personnel keeps administrators from knowing the extent of the problems. This leaves the Indonesians on the margins of the university community, once again.

FINAL COMMENT

The Project personnel at Washington State University are concerned about the quality of life and graduate education provided for our Indonesian colleagues. Efforts have been made throughout the life of the project to gather data which will assist administrators and Project advisors to improve lifestyle as well as technical training and English language learning for Indonesian scholars studying at Washington State University.

TABLE III

RESIDENCE PATTERNS OF CHILDREN OF INDONESIANS SCHOLARS ATTENDING W.S.U.

I. Single: 1 woman

II. Married, No Children: 4 couples

III. Married, With Children: 14 couples

- a. Children in Indonesia: 8 couples
- b. Children in Indonesia and Pullman: 2 couples
- c. Children in Pullman: 4 couples

IV. Ages of Children/Couple

a. Ages of Children in Indonesia (years)

1. 6, 4 1/2, 2 1/2
2. 13, 9, 5, 2
3. 1+ children; no. & ages unknown
4. 9, 4
5. 11, 9
6. 2+ children, no. & ages unknown
7. 1, 5
8. 17, 16, 14

b. Ages of Children in Indonesia & Pullman (years)

	Indonesia	Pullman
1.	17, 20	1+
2.	14, 13, 11, 7	5

c. Ages of Children in Pullman (years)

1. 6, 2
2. 7.4
3. 17, 15, 12, 3
4. 11 months

MEXICAN MUSEUMS:
EDUCATIONAL VENTURES

ROBIN ETHERINGTON

Mexico designed a programme of school museums, singular for its attempt to reach marginal regions as well as urban areas. Several aspects of this programme indicate that it could be adapted to varying cultural and societal conditions around the world.

Founded in 1974 by Mexico's National Institute of Anthropology and History in collaboration with the Secretary of Public Education, the National Programme of School Museums was operating in a number of the states. The school museums were intended to complement the school curricula and to stimulate respect for the national heritage. A museum for each primary school in the entire country was a central goal. For example, in Oaxaca, considerable effort was expended in an attempt to blanket the state with school museums. However, the schools of many towns did not participate. Although at the time of the fieldwork, January to June of 1979, there were 54 schools listed as participating in the programme, the effective sample size of this study consisted of 23 school museums. These were the only inaugurated ones. Inauguration proved to be critical in this study because it separated those school museums that were opened or potentially functioning from others which were not completed, or were being renovated, or else had closed completely. These statistics alone reveal that half of the projected school museums never really existed. Unfortunately, the problems surrounding the establishment of school museums continued to affect the few that did function.

It is particularly important to sketch in some natural and social background of Oaxaca, since the total setting is quite removed from that found in present day, highly industrialized countries, such as Canada.

The State of Oaxaca lies in the southwest part of Mexico. Its capital, Oaxaca City, is approximately 500 km from Mexico City. One of the poorer states of Mexico, Oaxaca has a predominantly indigenous population exceeding two million. Its annual growth rate of 1.6 percent is 2 percent lower than the national rate, probably due in part to emigration to the cities and even outside the country in search of work. On the other hand, generally bad health conditions result in high mortality.

The extreme poverty of the area is not to be underemphasized. Poor diet, scarcity of medical attention and unsanitary living conditions are characteristic. In addition, the human geographical panorama shows that 70 percent of the people live in widely scattered, small communities of less than 1,000 inhabitants.

The school museum programme tried to work in these small, partially isolated communities. However, the health and communication difficulties in these settlements often hindered both the establishment and development of the museums. Consequently, school museums had been promoted and established primarily along highways or in towns which had ready access to the state capital.

Another important factor in the establishment and promotion of the Programme of School Museums was the school and educational context in which school museums operated. Economically poor states, such as Oaxaca, are struggling just to provide sufficient rural schools to comply with the law re: obligatory grade school (1 to 6).

Because of the ethnic - linguistic variability found in Oaxaca, the focus of the educational system is the acquisition of basic industrial and agricultural skills, coupled with the ability to read and write in the official language (Spanish).

According to the 1970 census figures, 51.2 percent of the total Oaxaca State school-age population does not receive any instruction. Of the remaining 48.8 percent, 41.5 percent attend primary school, and the remaining percentage scales down through high school and post-high school levels.

We are dealing with a rural, agricultural population. Eighty percent are involved in agricultural activities. There is a conflict between the formal school schedule with its demands, and the family need for the children to aid during the agricultural cycle.

The annual drop-out rate in primary schools is 4 percent, due to children being incorporated into the family economy. It is coupled with a failure rate of 18.7 percent because of the system of final examinations, the crowded classrooms and generally poor school conditions. In short, half of the Oaxaca population does not even attend, let alone finish, primary school, thereby remaining totally or functionally illiterate (41.5 percent in 1974, according to the Census). There are not enough schools for everyone nor does the system address the needs and problems of the population.

In this area, the interdisciplinary focus involving anthropology, education and museology constitutes a unique approach to the socioeconomic conditions and the educational needs of a community. Exhaustive anthropological studies could serve as a basis for tailor-made educational programmes, subsequently disseminated via a museum or museographic techniques. A museum can be an active centre for a community. For instance, its displays could heighten the people's awareness of their socio-ecological environment and their effect upon it. It can provide not only information but also a place for community discussion and exchange of ideas and folk knowledge.

Discussion

The following discussion will enter into some of the specifics Oaxacan school museum programme. Presented are a few cases to exemplify the points and illustrate the circumstances encountered.

In the sample of school museums, the percentage of poorly functioning ones tended to be quite high, suggesting that the programme on both the national and state level was not reaching the local communities. Often the local conditions were not fully considered when plans were made for a school museum. In general, neither the programme's promoters nor school staff members actively contributed to the community awareness of the existence and use of the school museums. Because of the attitude of indifference, space, funds, labour and time were allocated in other ways. For example, in Cuilapan, where neither the school nor the town had regular water for eight months, understandably the renovation of the school museum was of low priority.

Normally these agricultural communities barely harvest enough for their own needs. However, when they do have a bumper crop, storage space is at a premium. As was seen in Guendulain, the space allocated to the school museum was converted into a storage area for corn and beans.

The schools and communities tend not to take full advantage of the school museums. Lack of interest by the local people may be partly attributed to strictures imposed from the higher bureaucratic levels of the programme. Many times promoters arrived in the towns, armed with prefabricated reasons to convince the school personnel that a school museum is a useful and essential educational tool. What the school and community perceive as educationally important is not taken into account. It is perhaps noteworthy to signal that only two schools took the initiative to establish their museums.

Potential increases in community participation could be achieved by drawing the townspeople into closer involvement with the technical aspects, such as selection of construction material, building the museum, the internal design, decoration and arrangement. This type of interaction could prove fruitful because the local people know most about the availability of local building and display materials, while the programme's personnel would be prepared to give museographic and educational content advice of a more theoretical nature.

It is important to note that teachers' training in Mexico corresponds to senior high school level and includes minimal study of contemporary educational theory and methodology. It does not emphasize museum services and resources utilized within educational context. Also most teachers in rural areas are from rural areas, and carry with them a traditional resistance to change and acceptance of new concepts and ways. Therefore, it is understandable that Oaxacan teachers are generally not aware of the potential of school museums in the educational process. There were a few instances where teachers actively encouraged use of the school museum. These individuals demonstrated willingness to experiment with a new educational alternative which placed a heavier work load upon them, especially in terms of time. The other teachers gave the museums little priority in the teaching schedule.

School museums can be used in many different ways to provide learning experiences for children and adults alike, depending upon the flexibility and activeness of the teachers, and the receptivity and freedom of the students.

In San Agustin Yatereni, a case in point, a group of first graders viewed a three day Temporary Exhibition to promote their museum. They were "herded through" without being permitted to actually look at, touch or inquire about the exhibition materials. Their teacher had not been properly informed about the subject, so she passed by it all without comment other than "fijanse bien" (pay close attention) and had the children out of the exhibition in five minutes. In contrast, a grade one class arrived for a natural science lesson in a Oaxaca City school museum. Their teacher started by referring to the seeds, plants and eggs that they brought in, then aptly turned their attention to the museum's material.

When the school museum was opened in Huitizo, pupils' parents visited. They were attentive and interested in what was displayed, handling and discussing their objects.

Due to spatial limitations, many museums jointly used a space with another facility. Often this enhances their involvement in community affairs. For example, Macuilxochitl's school museum was housed in the municipal building beside the school.

A similar situation exists in San Agustin de las Juntas, where the school museum share an extra classroom with the library. It is the only such facility in the community. Townspeople are encouraged to enter and secondary students use it for reading and research purposes. It is presently one of the few school museums in operation after the formal discontinuation of the official programme.

However, the majority of school museums did not function successfully with regard to the communities' and schools' use. There were many factors contributing to this problem. Nevertheless, the salient ones seem to be the negative attitude of the promoters and principals. These factors are consistently associated with poorly used school museums. The successfully operating museums usually have an active promoter and/or principal associated with them. For example, the promoter in Huitzo was concerned about Huitzo's history and decided to dedicate a section of the school museum to the subject. He borrowed literature and spoke with various townspeople to obtain information. He had pupils do research on the railway, a leading employer of the town. He constructed a photo display of the history of the town, emphasizing the principal buildings and features, and their historical importance.

Promoters generally approached the establishment of a school museum by offering advice to the local people, but several did not actually take part in the physical aspect of its formation. After having considered a multitude of factors causing their indifferent attitude, any one cause, such as time, distance or transportation, is difficult to pinpoint. A critical factor is certainly the topography, with mountainous terrain and isolation of the communities making travelling even a short distance very difficult and time consuming. This resulted in the promoters' preference to work in the central valley region. However, it did not directly affect their working attitude toward the school staff and townsfolk.

It is necessary to look at other factors that could affect the attitude of the promoters. For example, status conflicts between promoters and the local people may have some bearing. In Mexico, especially in marginal areas, socio-economic differences are prevalent causes of discrimination. The promoters often felt that it was below them to work alongside campesinos.

Another factor is that the promoters were overextended in terms of their work load. Taking into consideration the distance between towns and the time needed to travel it, they had less time and energy to spend in each town and school. However, they felt a pressure to "produce" school museums, i.e. to satisfy higher programme officials. As a consequence, many places were dealt with superficially.

Also the principals tended to have a negative attitude towards the school museum. Principals rise to their position from the ranks of teachers. They generally possess few administrative skills which enable them to coordinate the school operations, including incorporating a school museum into the school activities' schedule. Perhaps of greater importance is their general lack of background in educational theory, which could afford comprehension of the educational advantages of school museums. On the other hand, pressure to participate derived from the programme's personnel, may have alienated them, resulting in their de-emphasis of the museum in their school schedule.

A methodological consideration not only for the now defunct National Programme of School Museums, but for any such programme in the future, is the need to accommodate local programmes within the socio/cultural milieu of the area. This points to deeper analysis and understanding of local problems relating not only to schools, but also to health and living standards.

A respect for national heritage can not be instilled into the lower levels of society by the upper government echelon. Such respect must be derived from constant communication and consultation with people, as well as an assurance that a programme will be geared to their real needs and will be continued until the objectives have been completed, not terminated at the whim of each new politician.

Finally, reflecting upon the geographically and culturally diverse nature of the State of Oaxaca and the poverty level of its rural inhabitants, the school museum programme is brought into clearer focus. Economic deprivation sharply contrasts with the "luxury" of having a museum in every local grade school. Many times the crowded classroom conditions, the lack of library books and school supplies seem immensely more urgent than a museum. In places where running water, electricity and paved streets are novelties, some would consider a school museum an anachronism.

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RELEVANT EDUCATION IN NORTHERN NIGERIA

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INTRODUCTION

Only recently has special education emerged as a pressing concern in many Third World countries. As a result of her overall importance in world affairs, Nigeria's experience with the implementation of special education programs is of particular interest to people concerned with the promise and problems of extending educational opportunities to all the world's peoples. That experience can only be understood and evaluated within the context of Nigeria's total educational history. Within that context certain successes and failures stand out in sharp relief. Ultimately, the fate of special education in Nigeria depends upon whether Nigeria learns to apply the lessons of its own educational history while avoiding various pitfalls present in many modern educational development programs.

It is necessary, therefore, to sketch out the overall educational history of Nigeria with particular emphasis on the significantly different developments in Northern and Southern Nigeria and their consequences. In light of those consequences, the place of special education programs emerges clearly. If, however, they are to grapple successfully with Nigeria's development problems, they must overcome formidable obstacles, namely, discrepancies between Western and Nigerian cognitive maps, differences between indigenous and Western concepts regarding the definition and treatment of handicapped people, and consequent confusion regarding the goals and implementation of special education programs. Such obstacles merely add another layer to the "ordinary" problems of Nigerian education - a bureaucracy run wild, varying and competing systems of education operating concurrently, ill-prepared teachers and students, political and ethnic rivalries, and assorted other ills.

One special education program has managed to overcome those formidable obstacles and in so doing offers direction and hope to other programs. That program is the Intermediate and Relevant Technology Workshop centered in Jos, Plateau State. It developed procedures that directly confronted the problems inherent in the Nigerian educational systems and, in large measure, overcame those obstacles. Therefore, I shall focus attention on that program in order to derive a model which other special education programs can use in formulating their guidelines.

Finally, it is vital to address the different implications between local-level and national development. History offers guidance and aid in that pursuit. The Relevant Technology Workshop provides a case study possessing broad implications for development programs that attend to the potent interaction among history, local, and national imperatives. Those implications reach far beyond Nigeria to other Third World countries.

CONSEQUENCES OF NIGERIA'S COLONIAL EDUCATION HISTORY

The history of Nigerian colonial education is really the history of British colonial policy in Nigeria. It is, therefore, essentially two histories: that of Northern and Southern Nigeria. In Southern Nigeria, Igbo and Yoruba forced the British to provide modern education or at least to allow missionaries to do so. In Northern Nigeria the dogma of the Dual Mandate held sway and under the guise of a nice respect for Islamic sensibilities, the British failed to provide sufficient educational programs while simultaneously preventing missionaries from so doing.

Igbo, Yoruba, and other "Southerners" actively sought modern education. In such education, they perceived the key to advancement in the colonial administration. Their familiarity with British colonial administration and its need for clerical help provided them with incentive to master skills required for success in schools and in elite colonial society-punctuality, regular attendance, good deportment, obedience, and respect for authority (the hidden curriculum of Western schools).

In contrast, the "Muslim North" was protected from what Lugard feared might be objectionable religious contacts. Therefore, he prohibited missionaries from free access to Muslim areas of the North. Such a move was a pragmatic effort whose purpose was to allow Lugard time to assess the human and geographical dimensions of Northern Nigeria while maintaining peaceful relations with its Fulani and Hausa emirs, all with a handful of administrative officers.

Lugard's role in opposing the spread of Christian missions, whatever his original goals may have been, was significant in determining the future history of Nigeria. Its implications went far beyond educational issues to the roots of the separate development of Northern and Southern Nigeria. Although arguments regarding his motives still exist,[1] it is clear that Lugard's pledge to Muslim emirs that he would follow a policy of non-interference with Islam became the theoretical foundation for colonial opposition to missionary work in Muslim areas (Ubah 1976:356).

Theory, of course, is never made simply of whole cloth. Other factors contributed to British opposition to missions in Islamic areas. Lugard's successor, Percy Girouard, had served in the Sudan at the time of the Mahdist uprising and fear of a Nigerian repetition was uppermost in his mind (Graham 1966:55). Furthermore, missionaries openly opposed indirect rule and offered an alternative reality to Northern Nigerians, facts that did little to endear them to the Colonial Office. In fact,the "enthusiasm" of some missionaries contributed to Lugard's actions.

Lugard's first experience with missionaries in Northern Nigeria served to engender caution in subsequent dealings. In 1900, Lugard permitted Bishop Tugwell, leader of the Church Missionary Society's Hausaland Missions, to proceed to Muslim areas that were no further than the limit of government protection. Obeying a higher authority, they pressed on to Kano, an area beyond government control. There they suffered insult at the hands of the Emir of Kano, who refused to permit them to stay. Lugard learned of their dilemma from London newspapers, an obvious embarrassment. Further defying his authority, Tugwell refused to return when Lugard summoned him and had to be rescued from Kano by a Government expedition (Graham 1966(7):10-13 and Ubah 1976:355).

Even a cooperative missionary, however, failed to establish the type of education which the Government would support in the North. Walter Miller was a friend of Lugard who generally supported indirect rule. So impressed with Miller was Lugard, in fact, that he offered him Resident's rank and his own province. Therefore, it is not surprising that Miller and Lugard agreed to a compromise plan for missionary education in the North. Neither is it surprising that the plan was doomed to failure from the beginning.

Lugard agreed to allow the Church Missionary Society (C.M.S.) "controlled expansion" into the North in return for Miller's agreement to establish a boarding school in Zaria that met with his guidelines; namely, the teaching of moral but not religious education and the stressing of practical and not academic studies. "Controlled expansion" meant that the C.M.S. could preach to non-Muslims, work in hospitals, and establish schools in "pagan" areas. Miller would also gain access to Kano and Kontagora.

But, in 1905, no one seemed willing to compromise. The C.M.S. balked at the terms of the agreement, pointing out that not only were no men available for Kano or Kontagora but that the government gained everything and the C.M.S. nothing. After all, their primary job was missionization, not running charities for the government. Residents, by and large, wanted no missionaries in their provinces. Emirs, often encouraged by open hostility on the part of the Residents, opposed Miller's school. Even the Emir of Zaria who had agreed to the compromise refused to allow a boarding school for "impressionable" boys to be built. Miller found that the majority of his students were Islamic mallams, who expected that they were able to resist the enticements of Christianity. By 1907 the school was a failure. (Cf. Graham 1966:32-50 for a discussion of the events.)

Lugard's successor, Sir Percy Girouard, a Roman Catholic French-Canadian was openly anti-missionary in policy and made no pretense at compromise. For Girouard Western education was inherently Christian and provocative. For a man whose Sudanic experiences with the Mahdi had filled him with a desperate fear of jihad, his duty was clear; namely, limit missionaries to "pagan" areas of the North. The government, Girouard stated, would work out its own system of education.

Its failure to do so to any appreciable degree was a factor in missionary frustration. It lead to a symbolic action on Miller's part that altered Government-missionary relations. In 1927, Miller set up a permanent church building within Zaria's walls. His actions brought the publicity he sought, for a respected friend of Lord Lugard and a Nigerian resident of over a quarter century could not simply be dragged unnoticed from Zaria. Neither, conversely, could the Emir of Zaria's outraged appeals be ignored. The Emir had had a seven foot fence constructed round the church lest innocent Muslims be scandalized.

After the Governor-General of Nigeria and the Bishop of Lagos became embroiled in the dispute and the British public alerted, Miller consented to a compromise. Wusasa, a one-square mile site outside Zaria's walls, was given to Miller as part of his compensation for land lost within Zaria. In addition, the Native Authority gave him L3850 in further compensation, a sum he used to construct a boarding school (Ubah 1976:368-70).

The incident forced by Miller decided the future of Northern Nigerian education, for the school at Wusasa not only educated most of Northern Nigeria's future leaders but also led to the easing of missionary restrictions in the North. In 1931, the Government and missionary representatives agreed on three major items. First, missionaries were not to engage in unseemly competition for areas. They were to work out spheres of influence. Second, they were to exercise care in the selection of personnel; specifically, they were to weed out fanatics who desired open competition with Muslims. People like Miller who spoke Hausa fluently and obviously loved Hausa people and culture were models to be followed. Finally, there was a need to move slowly. Hausa, Kanuri and other Islamic peoples were to be respected and not antagonized. No open approaches to Muslims were to be made. If, however, Muslims made the initial move, then religion could be discussed. Miller, again, provided the model (cf. Ubah 1976:371).

It was not incidental that the easing of Administration restrictions came at the height of the Great Depression. It came at a time when scarce funds were even scarcer. It came too late, in sum, for Northern Nigeria ever to catch up with the rest of the country. Adding to the problem of advocates of Western education, of whom the missionaries provided the strongest supporters, was the conservative nature of the Administration's educational schemes.

Detailed examination of those schemes is out of place here, however, a brief summary is not. Part of the philosophy of Northern Nigerian education was based on a conviction that there was an inevitable link between Christianity and Western education. In the Government's view, that link had to be severed. Although missionaries had a place in the overall Northern scheme of education, it was a subordinate one.

Lugard, himself, was primarily in favor of industrial education and the compulsory use of English in such education. He, therefore, encouraged missionaries who provided industrial education. In order to prevent the identification of education and missionaries, however, he set up government schools, even originally setting up two freed slave schools under government control before economy forced their being turned over to the Sudan United Mission. Lugard, in fact, never sought to exclude missionaries from he overall Government educational policy in Northern Nigeria. Rather, he sought to control them.

Whatever his intentions, nevertheless, he and his successors effectively did virtually exclude them and the results are very clear. In 1955, there were 171,200 students in a school age population of 2,500,000 (Kirk-Greene 1966:xiii). Without missionaries there could be no rapid spread of education, certainly not under the mythological system that "indirect rule" had evolved into.

Koehl (1971:121-22) succinctly sketches the results of the Government's educational policy in Northern Nigeria.

> It would be fascinating to be able to draw a map of the educational culture of Nigeria at the time the young political and social revolutionaries of the 20's were school boys. Northern Nigeria with its own divergences would scarcely overlap the educational subcultures of the South. Perhaps the overlap would fall most in the animist Middle Belt where mission schools had succeeded in penetrating, and in a few government schools in urban areas. Ibo and Yoruba communities in the North were just beginning to introduce the already well-developed set of educational expectations from the South concerning primary schooling as the path to independent and family mobility and wealth.... The ferment among the young men had come in the South. The largest 'overlap of common educational culture' would still not blanket Southern Nigeria in 1914....

Koehl continues to discuss a more widely scattered Christian school culture, based on biblical literacy. Finally, in addition to British elitist schools, such as those the Northern Government fostered, there were teacher training schools which spread a rigid, if muted, Christianity to the North. Many southerners, moreover, had begun to participate in a worldwide metropolitan educational culture in London or New York. In sum, the North had fallen far behind the South and, more importantly, was immersed in a different Western as well as Islamic educational culture. It is in that setting that the Relevant Technology Workshop and its work must be understood, for its founder, S. William Eaves, set as his task a grass roots effort to close the gap between North and South and to develop Northern education from the bottom up.

THE RELEVANT TECHNOLOGY WORKSHOP

A common sight greeting passersby on the streets of Jos, Nigeria, is that of a disabled person's riding in an efficiently made wheelchair of obviously local material bearing the legend: Made by Intermediate and Relevant Technology Workshop, Jos. The word "relevant" has a magic attraction for anyone who has become cynical about grandiose schemes which seem invariably to fail in relieving the misery of those whom they are supposed to aid. Indeed, too often, these schemes enrich the small elite who administer them at the expense of the poor.

The colonial history of education, sketched earlier, was, if not an absolute failure, certainly one of unequal and uneven development. It exemplified development from the top down,and that at its worst. The aspirations of the relevant technology movement is quite the opposite. Rather than beginning with overwhelming schemes, relevant technology emphasizes grassroots development. Its stress is on the logical unfolding of the potential within a society rather than on the imposition or imitation of an alien pattern. Development is a process to be achieved through stages compatible with a society's culture, a transformative process rather than a disruptive one. Its goal is autonomy rather than dependence.

E. B. Schumacher gave the movement's rationale its most eloquent expression. In Small Is Beautiful (1973), he argued for development "as if people mattered". In contrast with orthodox theories of development, calling for "more" machines or money or cities or plans as a solution to any problem, relevant technology calls for less of everything, except for understanding and common sense.

Thus, relevant technology argues that because development countries have labor surpluses it is poor planning to rely on imports for "progress", for such reliance leads relentlessly to great dependency. Such misguided planning neglects the villages, sharpens unemployment, and forces rural migration to the city. Each step in the process weakens internal development and autonomy while transferring more and more power outside the country.

In education as in other areas, relevant technology opts for development from the grass roots not to them. In fact, it conceptualizes true development as inextricably bound with education and makes no distinction between them. Therefore, it urges the use of indigenous skills and materials in development, training people to solve problems not imitate others' solutions, and to be self-reliant.

These truly educational aims, in so many ways distinct from both those who advocated an essentially Western education for Nigeria and others, like Lugard, who wanted a merely technical one, were articulated by the founder of the Jos Workshop, S. William Eaves.

> ...the development needs of the Third World are best served by the introduction of forms of mechanical assistance to man in his everyday work, which are simple, readily usable, labour intensive, low in capital cost, easy to apply and capable of building on the skills and accomplishments of traditional society rather than undermining them. The inherent nature of technology in such a setting acts as a "developmental lift" raising progressively the stock of skills and acting as a vital mediating element between the near-subsistence of an unproductive peasant economy and the excessively capital intensive, fully-mechanized economy. Furthermore, these modern industrialized economies are manifestly unable to cope with a reservoir of minimally skilled manpower characterizing most of the less developed countries (n.d.:A2).

Eaves came by his philosophy in the course of an interesting and productive life, dedicated to development. During World War II, he trained as a mechanical engineer, working on aircraft instrumentation. His inclination, however, was toward saving lives. After the war, therefore, he worked as a medical engineer for the University of London's medical school where he developed experimental devices for treatment, rehabilitation, and surgery.

Because of his interests in innovative treatment of the disabled and his experiences with medical "experimentation" prosthetic devices, Eaves went to Nigeria in 1957 to help establish the first teaching hospital in West Africa, that of the University of Ibadan. The sight that greeted Eaves served to emphasize the need for a teaching hospital. A smallpox epidemic was raging in Ibadan and the hospital did not even have a roof, offering an early illustration of the irrelevance of colonial education.

Rather than complain, however, of the shortcomings of an irrelevant educational system, Eaves began to develop and apply techniques that he later used so successfully in the Relevant Technology Workshop. Initially, he established a maintenance unit for medical apparatus, a unit that employed and trained local people, including the disabled, to aid in fabricating surgical and medical appliances, using local materials and techniques. Eaves was always a believer in education that taught students to solve problems rather than to imitate "correct" solutions. The eleven years he spent in Ibadan served to strengthen his convictions regarding the necessity of divergent education. Colonial education served mainly to foster dependency, dependency on imported materials and inappropriate ideas. Eaves' emphasis on divergent education, stressing many "correct" ways for solving a problem, on the other hand, supported independence and creativity.

Whereas colonial education and its neo-colonial successor emphasized external indicators of achievement-diplomas, titles-Eaves was more concerned with providing confidence to his students. He worked with those whom formal education had disdained - local artisans, school leavers, and the disabled. Rather than emphasizing individual competition, he promoted team work and cooperative efforts to solve problems common to the group. Simple, efficient, and effective tools complemented the work of the Ibadan teaching hospital.

After seven years, Eaves felt that he might better aid people through teaching his proven methods at Johns Hopkins University. Those plans, however, were interrupted by the Head of State's request to "look in" on the first teaching hospital in Northern Nigeria. The hospital is located in Zaria at Ahmadu Bello University. It had the sole responsibility for 40,000,000 people's health needs. The challenge of "looking in" so occupied his imagination that he, reluctantly, turned down Johns Hopkins' offer after their third and last extension.

His experience at Ibadan had prepared his imagination for what greeted him at Zaria. There was no smallpox epidemic. There was a cholera one. Otherwise, things were remarkably similar. There were no doctors or nurses. Only ward attendants cared for patients. Many of the attendants were themselves weakened by cholera's ravages. The filth of goats, sheep, and people further aggravated a desperate situation.

Rather than giving up in despair, once again Eaves simply found appropriate technology to fit the situation. He not only salvaged sixty microscopes that had been discarded and buried by colonial officials, along with other valuable equipment, he also initiated a technical workshop to support the hospital's work. As was the case in Ibadan, he trained many of the local people who otherwise would have been fated to lives as beggars to live a productive life as medical technicians, building and servicing hospital equipment that otherwise would have had to be imported. Local workers, using local skills, solved local problems.

THE PHILOSOPHY OF RELEVANT TECHNOLOGY

Experience with the teaching hospitals had deepened Eaves' conviction that development must come from within. It must use local skills, material, and people and be consonant with local cultures. The over-formalized Western model of education, he believed, had retarded Nigeria's development through focussing it on irrelevant Western goals and ideals.

His meeting in 1970 with E. F. Schumacher, coinciding with the interference of bureaucrats in the running of the teaching hospital, served to strengthen his crystallizing philosophy. That philosophy received its first field test at a workshop founded in Kaduna, then part of Zaria State. Simply stated by Eaves the philosophy is summarized in the following quotation.

> ...the development needs to the Third World are best served by the introduction of forms of mechanical assistance to man in his everyday work, which are simple, readily available, labour intensive, low in capital cost, easy to apply and capable of building on the skills and accomplishments of traditional society rather than undermining them. The inherent nature of technology in such a setting acts as a 'developmental lift' raising progressively the stock of skills and acting as a vital mediating element between the near-subsistence of an unproductive peasant economy and the excessively capital intensive, fully-mechanized economy. Furthermore, these modern industrialized economies are manifestly unable to cope with a reservoir of minimally skilled manpower characterizing most of the less developed countries (Eaves n.d.:A2).

The workshop was a financial and pedagogical success. It showed a profit each year and found employment for each of its graduates. Some of the graduates founded their own workshops and trained their own apprentices. Government interference, however, hounded the workshop from its inception. It was founded only after Eaves took matters into his own hands.

Government ministers, like so many others, confused development with spectacular building and intricate Western artifacts. Therefore, they tended to view a relevant technology program as one that was condescending and anti-developmental. After months of patient discussion, Eaves decided to appear with his products at a meeting of the military governor's council. He asked everyone to come on the lawn of the estate of the military governor. There he drove a 270 pound minister on a wet driveway, using the bicycle ambulance built in the workshop. After that the ministers were receptive to demonstrations of the virtues of teaching aids, toys, wheelchairs, cassava grinders, and other useful and simply made items. The governor sponsored the workshop.

However, government interference continued and yearly budget struggles and the constant need to reconvince bureaucrats that relevant technology was pro, not anti, development led Eaves to seek association with the Bernard van Leer Foundation, a foundation noted for its interest in the education of the deprived. That association gave him more freedom to develop and test his theories regarding relevant technology. Therefore, in May 1974, he founded the Jos Intermediate and Relevant Technology Workshop. By Nov. 1974, the workshop was fully operationalized.

THE JOS WORKSHOP

The Jos Workshop recreates, in so far as possible, the rural milieu into which its graduates will return. The trainees come from every section of Plateau State on a strict quota system. The plan is in strict conformity with its commitment to spread the movement at the grass roots level. Local instructors quickly replaced those from Zaria who helped start the Jos Workshop. That is also in conformity with relevant technology's basic tenet of producing local leadership. Equally in tune with that theme is the use of whatever tools are available to produce the handiwork.

Producing local leaders who are responsive to local needs, using local people and material to solve grass-roots problems, involves a totally contextual instructional program in which the trainee is taught to use tools in the very process of making objects for sale. It is a conscious reversal of the normal methods of formal education. Eaves believed that innovation and initiative were thereby encouraged.

Additionally, trainees learn hygiene and safety in the very process of learning to make products. For example, if a knife were handled carelessly, Eaves stopped the work and gave a brief lesson on the proper method for handling knives. If trainees were to urinate in public or spit on the workshop floor, a lesson in basic hygiene was given. Eaves' point is that there is a natural unfolding of events. Rather than pigeonholing them, as formal education as it has come to Nigeria does, Eaves believed that the stress should be on the organic nature of learning, on the interconnectedness of its parts.

Although the workshop is essentially supported through a foundation, it purposely keeps ties with local and state governments. Those ties provide steady work for its trainees and useful networks for them upon graduation. Moreover, such ties are in conformity with the educational nature of the enterprise, for it should be reemphasized that the relevant technology movement is an alternative to the overformalized colonial and neo-colonial models of education. The Jos Workshop and its predecessors were established in order to aid primary school leavers, people who were unwilling to go back to farming as a result of their "Western" education and who unsuited to go on to much of anything else except unemployment and/or crime. Success with that clientele encouraged Eaves to expand the workshop's facilities to include the disabled and women. Both segments have been shamefully neglected in the modernization and educational process.

EXPANDING THE PROGRAM

Although Eaves had always been interested in training disabled people, they had not been included in the original plans for the workshop. A dramatic event forced him to add training of the disabled to his program.

A group of beggars came to see him to ask the price of a wheelchair. They told him that they would share the cost among themselves and each would take a turn using it. They hoped that this sharing would cut down on the frequency of the sores they were developing by crawling but increased their mobility and therefore their income from begging.

Eaves, in typical fashion, offered each man a chance to earn his own chair while being trained to become self-supporting. They were told to think it over and to return the next morning.

Eaves confessed that the sight that greeted him the next morning moved him as little else in his life ever did. He looked down the road from the workshop and saw thirty people streaming toward the workshop. Some were crawling. Others, slithering. That sight convinced him to make training for the disabled a permanent feature of the workshop, rather than an ad hoc one.

It has proved to be quite successful. Instructors in the program are themselves disabled, providing models for students. Most of the disabled in the program have been crippled by polio. As with other trainees, those who successfully complete the training either return home as self-supporting models, making art objects, toys, or teaching aids, or they work as demonstrators in workshops. Every workshop now has a disabled training program, training from one to thirty disabled people.

Although workshops are not integrated because of Northern Nigerian custom, Eaves had similar goals in mind in expanding into women's education; namely, the creation of relevant models for true developmental change in Nigeria. Women play very powerful roles in Nigerian life, and any program for change which ignores them is doomed from the start. Therefore, changes in women's attitudes and behaviors profoundly affect Nigerian life. There are, moreover, many traditional jobs which relevant technology can make easier for women. More importantly, it is vital to gain women's support for relevant technology to ensure its success.

The actual expansion into women's education parallel that into disabled training. A European missionary sister asked Eaves for a donation to begin a proposed workshop in Makurdi, Benue States. In keeping with the self-help principles of relevant technology, Eaves countered with an offer to train women who could then initiate their own workshops.

Training these women presented a few initial problems. The Commissioner for Education for Plateau State had to grant permission for coeducational education. The priest in charge of the local seminary aided in finding suitable supervised accommodations for the young women. Moreover, some of the young men at the workshop did not take kindly to having women in the workshop.

Eaves, himself, confessed to having some doubts when he saw the first of the three women who formed the first female group at the workshop. She had spent the night curled up on the workshop's veranda with three young children. At seventeen years old, she was little more than a child herself. Yet she was a widow already. Her husband, a man six times her age when they married in her twelfth year, had left her penniless at his death. Moreover, she was almost illiterate. She did, however, possess a fierce desire to learn and avoid prostitution, the only real alternative as a profession to a destitute woman in Nigeria.

She spurred her companions on to set a standard for competition that earned the respect of male students. That standard has been maintained by the few females who come to train in order to set up their own workshops or to work as instructors in female workshops, as the original group of women did. They returned to Makurdi to help establish the workshop there on a firm foundation.

EVALUATION

Success of graduates is one measure of gauging the impact of relevant technology. They have been immersed in a total experience in Jos for about a year. Each year there are about 150 trainees, including twenty-five disabled people. As of 1978, graduates had done quite well. There were four trainee founded workshops in Plateau State, each making a profit and training other skilled technicians. Additionally, most of the other 450 workers have found suitable jobs in either the commercial sector or the less demanding governmental sphere.

Moreover, all three sectors of the Jos Workshop are successful: the male school-leavers, female, and disabled. Each provides a viable model for change, understandable at the grass-roots level. Local talent uses local materials to meet local needs. Villages become centers for development, not the backwash of "modernization".

The Relevant Technology Workshop is an integrated approach to education in which full cognizance is given traditional culture and trainee capability for innovation. There is no divorce between theory and application, for the emphasis is on divergent problem solving, not on convergent correct answers. Whatever appropriate material is at hand, therefore, even that considered "junk", may serve the purpose of finishing the product. Similarly, important attitudes regarding safety and hygiene are taught in context, not in a pedagogically isolated fashion.

This approach uses indigenous culture in an evolutionary fashion. It provides efficient models for development which build on skills present within local society while channeling them toward innovative ends. Furthermore, while using locally available material in simple but efficient ways, local people gain confidence in their ability to produce useful modern equipment. Such demonstration of skill and workmanship help combat the slip-shod methods of production which Nigerians too often excuse as inevitable in their state of development, and which expatriates excuse in racial stereotypes.

The success of the Relevant Technology Workshop is also measurable in the way in which it has spread into other northern Nigerian states; Kwara, Benue, and Kano. Each of these centers generate branch workshops as well as trainee developed ones. Significantly, since the techniques are perfectly compatible with indigenous ones. They are readily integrated into indigenous society and understood by local people. Their payoffs, furthermore, are not "down the road" but take place at once and their benefits accrue at the grass-roots. This simple technology, however, introduces a precision and an introduction to higher technology found neither in local technology nor in Nigeria's modern Western sector, a fact many Nigerian officials, including then Head of State Lt. General Olusegun Obasanjo recog nized publicly (cf. Newsletter Bernard van Leer Foundation Spring 1978).

As Eaves wrote in an unpublished paper, "The application of Relevant Technology to the Nigerian Context",

> Relevant technology cannot radically transform the environment.... Relevant technology can, however, make things happen at the grass roots level where nothing has happened before (1977:10).2

CONCLUSION

The Relevant Technology Workshop is a response to the overformalized type of Western education colonialism introduced into Nigeria. Of course, more detailed research would likely indicate that Islamic education provided little better models (cf. Ubah 1976 and Omatseye 1982 for relevant discussions). Certainly, it is clear that overformalized education had not only failed to prepare Nigeria for independence but had been unevenly distributed. The South had, for various reasons, been favored over the North in access to Western education. Moreover, three categories of people were grossly neglected by colonial and post-colonial education: school-leavers, the disabled, and women. There were, therefore, general and specific ills and failures of the Nigerian educational system.

These ills are endemic in a system that views development as a unilineal evolutionary process. Moreover, it sees that process as one from the top down. Perhaps, modern elites are more careful in their wording than were colonial overlords but the model has, amazingly, not changed substantially from Lugard's day. In spite of lip service paid routinely, emphasis is still on elite education. The failure of Nigeria's Universal Primary Education Program was not only regrettable but inevitable. Launched in 1976, Universal Primary Education was declared a failure by 1980. Ten Governors of northern states in a conference at Sokoto unequivocally condemned it (Bray 1981:11-12). The death of Universal Primary Education dragged down any real hopes for successful implementation of special education programs.

Unlike U.P.E., however, the relevant technology program is not based on massive Western style capital-intensive programs that must deliver spectacular and immediate successes. It is a grass-roots effort that costs little and which embraces a multilineal evolutionary philosophy, respectful of local cultures, and which does not believe in the superiority of Western models, even for Western development. Neither, it must be pointed out, does it hold a romantic view of poverty. It does quite clearly distinguish between growth and development. Numbers do not impress it. The well-being of real people does. Development must take into account the local situation: culturally, socially, environmentally, and psychologically. Any program that ignores those local realities is doomed to failure. It may produce more Western educated elite who live in big cities and who claim to represent "the people" but it will not better the lives of those people, nor offer them any hope for their children.

Nigeria (and the rest of the Third World) has a choice. It can continue to confuse growth with development and sink ever deeper into the dependency trap, producing client elites to serve the needs of multinational corporations. Or it can choose real development and attempt to break the dependency trap. To do so would, in fact, be a courageous even dangerous step, for it would mean development from the ground up. That development does not hold the glamor of multimillion dollar new capitals or grand stadiums. Villages are not so glamorous as cities. The Western world, moreover, judges the Third World in its own manner, on the size and newness of things, exerting its psychological power over those still, unfortunately, psychologically-dependent on its judgments.

And yet, it is painfully clear that massive Western-style development has produced irrelevant education and technology in the Third World. It has continued the plague of dependency in the Third World and even sharpened it. Wealth, by and large, has accrued to a client class that, at best, uses its heritage to extort more for itself while keeping the "Fourth World" poor. To continue in that vein lies not only madness but the perpetuation of suffering for the vast majority of the world's peoples.

DEDICATION

Will Eaves was a friend who deeply influenced my thinking on development and people. Although, I suppose, I could have picked up many of the same ideas from books and such, it could never have been the same for me as an anthropologist. I had been puzzling over many of the discrepancies in development as I studied yet another resettlement and grand development scheme when I met Will. Will patiently let me discover what he already knew: development must come from the people or it is merely growth, not development. His death deeply shook my life, and I find myself wondering what Will would have thought of many of the "profound" theories of development so currently in vogue. His humanely skeptical perspective never was lost to either elitist "trickle-down" theories or to romantic "back to the native" views.

To Virginia who loved Will as much as I did, I also dedicate this work. Frank Charles and Catherine Ann-Frances remind me of what it's all about when I tend to take myself too seriously, and, therefore, I thank them for their gift.

NOTES

1. Ayendele (1971) argues that Lugard's opposition was merely pragmatic and not theoretical. Ubah (1976), however, disagrees and maintains that Lugard, indeed, and not Percy Girouard his successor, is responsible for anti-missionary bias and its consequences.

2. On Wednesday, March 22, 1978, Will Eaves died. Ironically, he was on his way home to spend his Easter leave with his family. The rear axle of his Range Rover fell off on the way to Kano, causing the car to turn over and kill Eaves instantaneously. Eaves's sane voice called for orderly, coherent development that would aid all the people, not simply the elite. Perhaps, his best monument is the fact that the relevant technology movement in Nigeria did not die with him. The JOs Workshop and its "children" still prosper and Will is still remembered.

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KITCHENS ARE FOR SLEEPING: ANTHROPOLOGY AND THE TRAINING OF ARCHITECTS

BETTY POTASH[1]

It is night in an African city. Imagine that we have spent the day examining the architecture of the town. During our wanderings, we have come across modern office buildings, luxury hotels and Western style shops, along with a variety of enclosed and unenclosed markets. In some areas, barbers, cobblers and cooked food sellers ply their trade on the streets. There are spacious residences for the well-to-do with landscaped gardens surrounded by walls or fences; smaller tin-roofed cement and concrete block dwellings, often consisting of no more than a room or two, with outdoor kitchens and toilets; and squatter settlements of mud and wood houses with roofs made from cardboard, burlap and packing crates.

Now we come upon a middle income housing development. The multi-storied blocks of flats or apartments would not seem out of place in a European or American town. But as we come closer, we sense a difference. The grounds separating the buildings are mostly bare earth, with only an occasional clump of dry, brown grass. There are no trees or shrubs. The buildings themselves have a shabby appearance, although they are not old.

We enter an apartment and peek into the kitchen where several girls are sleeping. Mats and mattresses have been spread on the composition floor which has already buckled in places from the heat of a charcoal cooker. The walls are sooty from charcoal smoke, and the single window offers little ventilation. In the living room or sitting room, we are struck by a profusion of furniture. There are several sets of sofas with matching chairs, each in a different fabric or color. These hug the perimeters of the room. The only decorative items are a few calendars on the wall. In the center of the room, the available floor space is taken up with bedding on which men or boys are sleeping. The bedroom is similarly occupied, perhaps by a couple with their young child, perhaps by a man or several men. As we look out of the balcony, in place of the patio furniture we expect to find, we encounter a collection of sacks and boxes. This is evidently a storeroom. From neighboring balconies, we hear the occasional sound of chickens moving in their cages. All of this is jarring to the Western eye. People are not living as they "should"; they are not using space in the way the architect intended.

CULTURAL VARIATIONS IN SPACE UTILIZATION

That cultures vary in the manner in which they use space is well known to the anthropologist. Many monographs map the arrangement of buildings in compounds and villages, describe their occupants and furnishings, and note the purposes for which different structures are used. Every culture has its own definitions of activities and persons appropriate to particular areas. There are rules regarding which activities and persons may be brought together and which must be segregated. Such rules help to maintain social distance and control the amount of information that is communicated. Violations of rules create uneasiness; they are frequently perceived as immodest behavior, invasions of privacy, or even violations of morality or religious beliefs.

The discomfort created by the inappropriate sharing of space can be illustrated by many examples. In Western society, for example, space is divided into public and private areas, which Erving Goffman calls frontstage and backstage (Goffman 1959). If visitors accidentally go backstage and witness preparations and activities they are not meant to see, this creates embarrassment. Goffman describes the complex ways in which people cope with such awkward situations: pretending not to see, immediately withdrawing, using humor or other devices to save face.

In Africa, the urban Luo of Kenya also go to considerable lengths to avoid the inappropriate sharing of space. They believe that not only is it wrong for parents to sleep under the same roof as a married child, but violations of this rule are thought to cause an illness they call chira. Since men living in Nairobi must offer shelter to visiting parents, they do so by creating or maintaining ties of friendship with other Luo who can be called upon to provide such hospitality (Parkin 1978).

Space is not a neutral arena for activities; its characteristics are not objective givens. Rather, space is culturally ordered and such ordering has meaning. Perceptions differ on what constitutes adequate space and what is aesthetically pleasing. Hall, who has written extensively on this topic, treats space as a system of communication (1959; 1966). He calls it the "hidden dimension." Let us consider a few examples of cultural differences in spatial arrangements.

Among rural Luo, many activities are segregated by age and gender. Seniority is an important principle of social organization; people of different age statuses should not witness or have knowledge of the sexual or amorous activities of proximate generations. Not only does each wife have her own house in the compound arranged according to seniority, but adolescent sons also have their houses where they entertain male and female friends. Adolescent girls, as well, live apart from their parents. In former times, they stayed with "grandmothers", post-menopausal women; today they sleep in the kitchen. It is only young children -- and the husband -- who sleep in a woman's house. Although young people of the same sex and generation may occasionally share quarters, generally each adult (or near adult) member of the household, except for the husband, has his or her separate dwelling where s/he may conduct activities and entertain visitors outside the purview of others. This pattern of residence both symbolizes social divisions within the household and provides sufficient space to permit adults and adolescents to share a compound while maintaining privacy.

The Hausa of Northern Nigeria have a different organization of space based on Islamic rules of seclusion. Since women's activities must be isolated from those of men, both women and men need separate reception areas to receive visitors. In the affluent households I visited in Kano, wives have two rooms, an inner chamber for sleeping and an outer room to entertain other women and family members. These reception rooms are decorated with a woman's collection of valuables and her enamel pots, which constitute her dowry and symbolize her wealth and status.

Western residences, too, have their spatial divisions. Some areas in the home -- kitchen, living room, family room -- are open to all household members regardless of sex and age, and sometimes to visitors as well. They symbolize family "togetherness." Such areas may be used for entertainment either by the family as a whole, or by the married couple. Guests typically include both women and men. While concepts of privacy are important, they pertain more to individuals than to social categories of gender or age. Where possible, every household member except for the conjugal pair has his or her own room. Even young children sleep apart from their parents. Such areas are regarded as private and are usually not entered without permission.

If we think about the implications of these arrangements, it is immediately apparent that the Western pattern of a single living room or family center is inappropriate for many societies, such as Hausa or Luo, where hospitality and social interaction are not centered on the family unit or the conjugal pair. Yet Western models are often used for housing design in the Third World. While many studies have been done of other aspects of urbanization, we know little of how people adapt to these new spatial arrangements. Where, for example, do young urban Luo men and women carry out their social life? Do they go outside the home, perhaps visiting beer halls or other public places? Do other household members retire when they have visitors? Or do new housing patterns lead to a breakdown of age segregation? What is the emotional response to sharing a single dwelling among people who were formerly able to maintain social distance through residential separation? Are there anxieties about privacy? Problems of social interaction? While studies of psychological responses to the environment have been conducted in Western societies (Proshansky, Ittelson, Rivlin 1976), I am not aware of such research for the non-Western world. Perceptions of crowding may relate less to the sheer numbers of people involved than to concerns over the ability to maintain appropriate social distance. But architects seldom design buildings with such cultural variations in mind.

Modern urban housing may be inappropriate in other ways as well. Even simple activities and behavioral patterns of people are not usually examined and used as a basis for formulating designs. Some years ago, when I was doing research in Ghana, there was a series of letters to the newspaper about food preparation in multi-storied apartment houses. Fufu, the staple porridge, is made by pounding cassava. In homes which people build for themselves, the kitchen is generally a separate structure; pounding disturbs no one. But where modern housing is built with inside kitchens, downstairs neighbors may find the sound disturbing. Some correspondents complained about the inconsiderateness of neighbors who continued to prepare fufu in blocks of flats; others responded by arguing that Ghanaians should not be expected to change their food habits because architects were too foolish to design houses properly. The debate went on for weeks.

Other examples of poor design abound. Many urbanites in Nairobi continue to use charcoal cookers, with which they are familiar, in preference to gas appliances which are more costly and require the regular delivery of gas cylinders. But indoor kitchens do not have adequate ventilation for the smoke. Where floors are made of synthetic composition material, both floors and walls rapidly show signs of deterioration from the heat and smoke. The dimensions of cabinets in upper-income houses may be appropriate for the tins and boxes of prepared foods common to the Western diet, but few Africans make use of such ingredients. Yet cabinets are not designed to hold sacks of ground maize or millet.

Some housing is better designed. Nona Etienne found that the low-income housing estate she studied in Abidjan was generally "well-adapted to the lifestyle" of the Baule residents (Etienne 1980). Cooking areas, for example, had concrete floors and were outside. But even here, bathing arrangements were poorly planned. Cold water showers had been installed on the assumption that this would be adequate to a tropical climate. But the Baule prefer warm water. The showers went unused.

Patterns of etiquette and styles of social interaction are also reflected in spatial arrangements. In Western homes, furniture is usually arranged in conversational clusters, sofa and chairs facing each other. Rooms have one or more such clusters, depending on their size. Large social gatherings typically break up into smaller groups. During the course of an evening, guests circulate among groups, standing outside listening until they are sure they are not intruding, and then gradually joining the conversation.

African patterns of social interaction and furniture arrangement are different. In place of conversational clusters, seating is placed along the walls of a room. The host sits at the head in a position of honor. As visitors arrive, they are expected to go around the room, greeting each person who is present before taking a seat. Conversation is general to the group. Sometimes people just sit. Occasionally someone may turn and speak briefly with the person seated next to him.

These differences in social interaction sometimes lead to misunderstandings when Africans and Westerners come together. In several African universities, for example, both local and Western scholars commented to me about the unfriendliness of the others. Some of this perceived unfriendliness appears to relate to differing patterns of etiquette and differing behavioral expectations. I have observed Western faculty members stand at the door of a senior common room, look around for a familiar face, and wait to be recognized and invited over. When invitations are not forthcoming, the Westerner feels unwelcome or fears to intrude and goes off and sits by himself. Sometimes he joins other expatriates who do greet him in the expected manner. The African staff, by contrast, expects new arrivals to greet those who are already present before taking a seat and/or joining a group. The failure of Westerners to do so is similarly interpreted as a sign of unfriendliness.

While social behaviors are different, the dimensions of living rooms found in architect-designed buildings, and the type of furniture used by upper and middle income people, generally conform to Western models, although the furniture is arranged differently. One wonders if different designs might be developed which would be more aesthetically pleasing and better suited to the African patterns of social interaction.

This issue of designing for people is an important one, not only for residential buildings, but for public spaces as well. One has only to see the confusion on some faces in public buildings to recognize that the arrangements of corridors, offices and staircases are puzzling or intimidating to many who use them. Dispensaries and hospital waiting rooms are often crowded with mothers and children who wait for hours on wooden benches. There is no place for children to play and nowhere to leave a child when the mother enters the examining room. Parks and recreational areas in Nairobi and some other African cities are more often frequented by foreigners and visitors than by locals, except for a handful of elites. But little attempt is made to design recreational space that Africans might feel comfortable using. The pressures of urban life are surely great enough without adding the further stress of needing to adapt to poorly designed, unfamiliar, or inappropriate environments, both public and private.

AN ANTHROPOLOGY CURRICULUM FOR ARCHITECTS

It was such issues that were the main focus of a course I developed for architecture students in Kenya. From 1974 to 1976, while serving on the faculty of the Anthropology and Sociology Department at the University of Nairobi, I was asked to develop a social science curriculum for the School of Architecture. In lieu of the standard introductory courses usually offered to Liberal Arts students, I decided to show how anthropological and sociological insights could be used by architects in the practice of their profession. After consultation with the Architecture faculty and other members of the Anthropology-Sociology department, we decided on a three year program. The first year was to be devoted to introducing students to appropriate social science concepts and showing their relevance for architecture. During the second year, the students themselves would observe and report on how people use space in a variety of rural and urban settings. Since the third year was spent on project design, there would be no social science course as such. It was agreed, however, that the projects would be evaluated not only on the usual architectural criteria, but also on their suitability for the life-styles of the people who would use these spaces. To this and social science faculty would be available for consultation.

I was able to present only the first year of the program before leaving Kenya. Moreover, towards the end of my stay the university was closed in response to student demonstrations. Some of the demands concerned the School of Architecture. A number of students complained about the administration of the school and the training they were receiving, arguing that the training and the criteria on which they were evaluated were inappropriate for Kenya. When the university reopened, the school's faculty met to review student complaints. I do not know the outcome of that review; nor do I know what happened to the curriculum I designed. I can report only on the first year's program which I offered.[2]

The course consisted largely of lectures and discussions, with only occasional hand-outs, since no textbooks were available to me at the time. For the lectures, I drew on my own observations, my knowledge of the ethnographic literature, and whatever published and unpublished works I could find in the university's holdings and my personal library on anthropological studies of space, Third World urbanization, community studies, and urban planning, as well as statistical data on demographic trends, national budgets, and housing policy. In addition to the works of Hall (1959; 1966) and Goffman (1959) which I found particularly helpful, I used a variety of different sources, some of which are noted below.

The first year focused on the importance of understanding cultural variations in the organization of space as a basis for architectural design. Different principles of social organization, household composition, and behavioral and ideological factors were examined. Since I have briefly discussed some of this material above, I will not belabor the reader with further examples.

In order to give students insight into the social and political context in which they would be working professionally, a number of other issues were also explored. These can be grouped under three headings: 1) Third World Urbanization and Demographic Trends, 2) Urban Planning and Community Organization, and 3) Policy Issues and Professional Responsibilities. I discuss each briefly below.

THIRD WORLD URBANIZATION AND DEMOGRAPHIC TRENDS

The rapid growth of cities in the Third World has important implications for national planning and for the allocation of resources between town and countryside. As urban areas experience increases in population, the need for housing, problems of sanitation and health, concerns with national image, and fears of political unrest among a more concentrated urban population usually result in a disproportionate share of national income going into cities. The implications of such policies for balanced development, and their consequences on food production, migration and the like, while discussed with students, are beyond the scope of this paper. However, since it is the urban milieu in which architects can expect to do most of their work, it is necessary that they understand something of the demographic characteristics of towns.

Many cities in Eastern and Southern African have population structures different from both Western cities and local rural areas. In Kenya, for example, there is a preponderance of males to females in Nairobi and other cities, with a predominance of men in their adult productive years, although the sex ratio differences are not as pronounced as they were in colonial times. In addition to married women living with husbands and unmarried daughters with parents, there are also women living alone, with or without children. Most rural areas, by contrast, have a high proportion of women and children, along with older, retired men. These differences relate to patterns of migration; the sexual division of labor, and the economic difficulties many families have in finding adequate means of support in either the rural or the urban areas alone. Such population structures have implications for housing design and urban planning.

Anthropologists and others have produced a vast body of literature on migration patterns and their transformations. Where "target" migration in which men seek cash for specific goals was once characteristic of many areas, the monetization of the economy with its attendant needs for regular cash and the difficulty of securing urban employment have given rise to a more stable urban population. Many men now spend most of their adult productive years living outside the rural areas except for occasional visits. Most married women, by contrast, usually remain in the countryside where they can support themselves and their children through farming. This pattern is an adaptation to several factors: the importance of women's food producing activities, their limited employment opportunities in town, and the low wages of most men (which are not adequate to maintain a family). But there are variations depending on the stage of family development, the education and income-earning opportunities of women in town, the husband's income, the type of marriage, and the like.

Luo, for example, exhibit a number of such variations. In some marriages, brides initially accompany their husbands to town and reside there for some time, usually until the birth of one or more children, or until children reach school age. At that time, most return to the rural area to farm and feed their children. A few women who have educational skills that enable them to obtain high-salaried jobs, who are able to earn adequate incomes from petty trade or other activities or who work in shops or market kiosks owned by their husbands, may remain more-or-less permanently in town. In polygynous homes. one wife may reside with the husband, or wives may take turns. Sometimes women only visit, usually circulating between rural and urban areas during the non-farm season. Patterns of childrens residence also vary. Generally, a child stays with the mother, but in some cases, children remain with fathers in town in order to benefit from urban schools. These disparate patterns suggest very different housing needs, depending on household composition.

Moreover, the household itself fluctuates over time, as Ross and Wisner (1977) and Parkin (1978) demonstrate. Such fluctuations are further compounded by new migrants' extensive use of kinship connections to obtain temporary or long-term shelter. Visits from rural relatives, who must be shown hospitality, also affect spatial needs.

What these patterns suggest is the desirability of a mix of housing with a flexible arrangement of space in which different numbers of people can be accommodated as the need arises. Western models designed for a nuclear family of fixed composition do not meet these needs. While people adapt, using kitchens, living rooms, and balconies as sleeping and storage areas, such arrangements are not optimal and often result in a more rapid deterioration of housing.

Other models might be more suitable. The Japanese, for example, do not divide space up into fixed areas in which particular functions are carried out. Rather, the same space is used for different functions. As Hall notes, "In the United States, people move from room to room or from one part of a room to another for each different activity, such as eating, sleeping, working, or socializing with relatives." He contrasts this with Japan where "walls are movable, opening and closing as the day's activities change... In Japan, it is quite common for a person to remain in one spot while the activities change (1966)." Movable partitions, portable furnishing, and storage areas permit this multiple usage and offer greater flexibility. The issue, of course, is not which foreign model Africans should adopt. Rather, it is the importance of pointing out to students that more than one model exists, and that it is quite possible for them to create their own models suitable to the local situation.

URBAN PLANNING AND COMMUNITY ORGANIZATION

While community planning is not typically a responsibility of architects, it seemed useful to acquaint students with the ideas of urban planners, and to contrast planners' views of what factors are important to the creation of communities with anthropological and sociological studies of community organization. A number of sources were used to illustrate some of the variant patterns of social relationships on which communities are based. Some of the studies we examined include Nici Nelson's research on Mathare Valley, a squatter settlement in Nairobi (1979), Peter Marris' account of urban renewal in Lagos (1961), as well as sociological studies of Western communities, such as Herbert Gans' book on an Italian-American community (1962), and the work of Michael Young and Peter Willmott on a working class community in London (1957). Some of these accounts also discuss the impact of urban renewal.

The Nelson and Marris studies show how women's economic activities and the networks that developed around such activities were threatened or impaired by urban renewal programs. In Mathare Valley, many of the women are independent household heads who depend on the illegal brewing and sale of beer to support themselves and their children. The concentration of brewers in a single area and the location of Mathare Valley attracts clients and enables women to establish support networks with other beer sellers. While each woman works independently, no woman brews daily. Nor can a woman normally retail an entire 16 gallon drum, the amount produced from a single brewing. In order to have adequate supplies on hand for clients, women buy beer from one another, often on credit. Women also help each other in a variety of ways. They borrow equipment from one another, help in quarrels with customers, warn each other of police raids, assist with the payment of fines, inform a woman's family or friends if she is arrested, and look after children while she is away. When the City Council decided to tear down Mathare Valley and resettle some home owners (but not tenants) in new housing estates, the community objected. They successfully blocked the plan to destroy Mathare, although some owners did relocate to new housing.

Marris also found that urban renewal was a threat to social and economic patterns. When the government decided to rebuild parts of Lagos Island, some but not all of those displaced were rehoused in the mainland community of Suru Lere. Those women and men who engaged in trade, however, depended for their clientele on the concentrated population of workers and residents on Lagos Island who passed their stalls daily. Many had established long-term relationships with customers. The relocation resulted in a loss of trade and income. Others who had jobs on the island faced transportation problems and had added expenses. Finally, extended family relationships were affected. The dense concentration of population on the island meant that family members often lived close by, some in large extended family homes. Visits among members were frequent, often on a daily basis. But relocation dispersed relatives, reducing the frequency of contact. Many of those who were resettled felt isolated and cut off.

These studies and many others from both Third World and Western societies show the frequent disruptive effects of urban renewal on communities. But little work has been done on the long-term adaptations of people who have been displaced. I left Nairobi in 1976 to take up a teaching position at the University of Lagos. While I did not do research on Suru Lere, I was able to see the community some 17 years after Marris had completed his research. Far from being an isolated and remote outpost, the Suru Lere I saw was a highly congested, bustling area with many hawkers, shops and craftsmen. As the metropolitan area had expanded further out on the mainland, Suru Lere, because of its proximity to Lagos Island, could now be considered to lie in the heart of the metropolitan area. While transportation problems continue to exist, the problem is more one of traffic congestion than of remoteness. Indeed, many people come to Lagos from areas much further away than Suru Lere. These observations suggest that there have been adaptations and adjustments over time. People have developed new trading relationships, and presumably new patterns of friendship as well. Families have not disintegrated. Throughout the Lagos metropolitan area, and presumably in Suru Lere also, Yoruba hold frequent or regular family councils, participate in naming ceremonies, weddings and funerals, and visit relatives. While the daily visits Marris describes have probably disappeared with the dispersal of people to the mainland, other adaptations have been made to maintain the extended family. Such long-term patterns of adaptation may not be immediately apparent or even predictable at the time an urban renewal project is first studied.

There are, however, some features of social organization which can be permanently destroyed if the new projects do not allow for the maintenance of important social and economic patterns. Apprenticeship systems, for example, which are widespread to West Africa require adequate workroom space, and space to house apprentices who typically live with the craftsman. The perpetuation of craft skills such as weaving, tailoring, and baking, and the livelihood of craftsmen and craftswomen, can be seriously threatened if new housing does not provide adequate space. Threats to the apprenticeship system have side ramifications throughout the society since such relationships link families, provide women with domestic assistance that enables them to engage in extra-household economic activities, and offer training to those unable to obtain a formal education in the schools.

Other patterns of social relationships may be equally dependent on space. Among the Baule of the Ivory Coast, a major source of a woman's wealth and power comes from her ability to acquire a following of junior dependents, which consist of a woman's own children and children she acquires through adoption. Such adoptions strengthen ties between maternal kin, and children have ties to both their natural and adoptive mother. Rural and urban linkages are also maintained through this system, since rural relatives often send children to kinswomen in town. But new housing built in Abidjan generally does not provide adequate space to house a large following of dependents. These physical limitations are likely to have far-reaching effects on the social system, changing the balance of power in gender relations, weakening rural-urban links, and affecting kinship ties (Etienne 1980).

If we contrast such studies with the ideas of urban planners on what is necessary to maintain or create communities, the differences are striking. Many planners are concerned with providing such physical amenities as community centers, schools, recreation areas, shops and other facilities for residents which are thought to promote social interaction and create a community. Some are interested in obtaining a good mix of commercial and residential facilities. But anthropological and sociological studies show that communities are organized in complex ways around diverse principles of social relations. If planners are not cognizant of the pre-existing principles that hold a community together, urban renewal may unwittingly destroy or transform social systems, however desirable it may be for reasons of health, hygiene, or economic growth.

POLICY ISSUES AND PROFESSIONAL RESPONSIBILITIES

Policy issues were raised throughout the course, and the implications of national policy for the professional responsibilities of architects was discussed. Given the limited resources available to government, what priority should be given to housing and other types of construction relative to other development needs? We examined the patterns of resource allocation between rural and urban areas, and between different socio-economic strata of the population. How would these allocations affect the future shape of Kenyan society? What is the relationship of such factors to the manner in which architecture is practiced? For example, even if we agree that more culturally appropriate construction and/or better urban planning is desirable, is this affordable, and should funds be expended in this manner?

Another topic for analysis was the nature of government involvement in housing. Kenya, like many former British colonies, has inherited a system of compensation in which highly subsidized housing is provided at low cost as a job-related benefit to upper and middle-class workers in government and government-funded institutions, as well as in the private sector. Lower-level workers receive no housing except in a few occupations such as domestic service or the railroad. The quality of housing is associated with job rank rather than with household size. As a single faculty member of the university, for example, I was given a two-bedroom furnished apartment with balcony and garden. If my memory is correct, I paid approximately $30 a month, roughly one tenth the cost of the rental market. The university paid market rent to the building's owner. Such a system is not only costly, but it allows for collusion and favoritism between landlords and those responsible for obtaining staff housing. While I could not obtain data on the overall costs of such housing to the government, if such costs are treated not as employee compensation, but as part of government housing expenditures, it seems likely that a disproportionate share of all expenditures is allocated to upper and middle income employees for rental housing. If such policies continue, architects are likely to be working on more expensive housing for which they could use innovative culturally appropriate designs.

While some housing is built by government for rental either to lower-level workers who are not entitled to housing benefits or to those in the informal sector of the economy, such housing is usually less specious and of lower quality. Some are site and service schemes. Moreover, the amount of such construction is not adequate to the need. Lower income workers pay a disproportionate share of their income for inadequate housing, while those with higher salaries, who could better afford housing costs, are subsidized.

What responsibilities do architects have in this situation? Should they attempt to influence government policy? On what issues? Should they be concerned with political issues involving the equitable distribution of resources? Or should their province be restricted to areas of technical expertise, such as urging the construction of urban environments more appropriate to the population? Do architects themselves have a responsibility to address the needs of those bypassed by government policy? Should they design and undertake projects to house the rural and urban poor? Should they try to devise low-cost methods of construction, perhaps using local materials and traditional building techniques to stretch budgets and provide a greater quantity of housing? Or are professional responsibilities limited to carrying out whatever commissions are received according to accepted architectural standards?

As might be expected, there was no unanimity of opinion on these issues; discussions were spirited. But these are questions that must be raised, not only for architects but for all professionals operating in the developing and the developed world.

I do not know what impact this course had on students' perceptions. Nor can I determine the extent to which they were able to translate the concepts discussed in class into building design. Nonetheless, I remain convinced that anthropology has much to contribute to the training of architects and, indeed, of many other professionals as well.

NOTES

1. I would like to thank Mariam Slater for her helpful comments on this paper.

2. Due to the rescheduling of the academic year following the reopening of the university, I was unable to actually complete the course. A colleague took over after I left and presumably followed the course outline I had developed. In the interests of simplification, I do not in this paper distinguish between those lectures actually presented and those I had planned.

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APPROPRIATE EDUCATION AS A DEVELOPMENT RESOURCE IN RURAL INDIA

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Appropriate education for Third World societies has been a focus of infrequent attention by scholars and development practitioners. In the majority of cases, critics have assailed the deficiencies of curricula and syllabi created during periods of external colonialism to suit the needs of European administrators. In parts of Africa and Asia particularly, critics of contemporary educational policies and practices point to the colonial legacy as the major source of failure for many developing countries. On the other side of the coin, the literature describing creative, original, indigenous educational programs that would more suitably train the young students of new nations is regrettably scant. Indeed, what literature exists suggests that, more often than not, it is well-intentioned Westerners who design a more appropriate educational program for a Third World society.

The centrality of effective education to successful modernization and rural development in Third World nations has been cited in a number of studies. For example, in their multi-societal study of factors encouraging the evolvement of "modern man", Inkeles and Smith (1974:284) cited the pre-eminence of education as a precipitator of modernization: "Of the early experiences in life, only education was a highly important key to individual modernity. Indeed, standing alone it was by far the single most important determinant of a man's modernity." Nayar (1979:48) in an article on non-informal education in India refers to education as "...the heart of the development process." Dubin (1976) calls education a "low-cost technology" for agricultural development. Moreover, adult education of village agriculturalists has been a focal point of many successful rural development programs such as the work of Hatch in rural Kerala (1938), Mayer in rural Uttar Pradesh (1958), Mathur and Neurath (1959) in rural Maharashtra, as well as Dubin (1976) in West Africa. While these successes have focused on agricultural improvement, education can also have important impacts -- if transmitted to rural villagers in an appropriate "package" -- for overall social and economic change.

Two major problems confront the successful social and economic development of India's many villages. That is, major roadblocks to village modernization reside in the lack of a skilled human talent reserve willing and able to solve local problems in a methodical, effective manner. Young men and women presently receive an educational product which does not prepare them for developing the full potential of themselves or their natural environment's resources. Rather, they learn rudimentary reading, arithmetic, writing, and history before they complete elementary school. Those who stay behind in the village and become its future leaders and citizens are thus unequipped to deal with many kinds of challenges that will confront them collectively and as individuals during their lifetimes. The brighter, wealthier students leave the village for secondary and college education where they learn not only skills and aptitudes but also attitudes and values. A major message imparted by the secondary school and college environment is the undesirability of village life and everything associated with it. Thus, even though they might learn useful knowledge and scientific insights which could be applied with great effect in solving village-level problems, the brighter young secondary and college student is socialized to scorn the village. Consequently he may seek any occupation in a district capital town or urban center no matter how poorly it pays upon completion of his education.

This problem is highlighted when one looks closely at some case studies in which one might reasonably expect that village-oriented education had taken place but, in large measure, had not. For instance, in the state of Tamil Nadu near Madurai is a "rural university" founded originally to manifest Mahatma Gandi's concern with those he considered the neglected majority in India: rural villages, especially the "untouchable" groups. Thus, the Gandigram Rural University (GRU) was opened in the 1950's to serve rural villages in Tamil Nadu by training young people in skills that they would then take back to the villages. The GRU curriculum included courses on agricultural production, poultry management, cooperatives, beekeeping, and many other rural-oriented economic subjects. In addition, the whole educational thrust of the university's degree program was directed toward the certification of students in areas that would only be relevant in village and rural contexts. Regrettably, in recent years, the GRU program has lost much of its rural orientation and village focus as more and more students kept away from those subjects and courses which would only be useful in village life. Increasingly, students opted to take courses which would qualify them as rural loan officers for banks...work that will necessitate some contact with villagers but usually in the safe confines of an urban-based bank building. Some staff at GRU expressed dismay in 1980 that the school had become, in the words of one, "just another degree-granting institution like any found in a city." The fact that it was located in a rural area had little or no impact on its basic educational program in recent years.

On a personal level, the lack of "fit" between a college curriculum and the needs of rural life are dramatically documented by the plight of thousands of young Indian college graduates who throng the larger cities and district capitals. For example, Mohan, a young man who helped me conduct research in rural Maharashtra, was a B.A. degree holder in geography who had graduated from a small private college in a larger district capital. Like so many of his cohorts, Mohan was born and raised in a small village, had hardly traveled or been exposed to many new ideas or people, and, regrettably, could best be described as"semi-educated". After graduation he had sought intensely for employment commensurate with his new educational status as a B.A. graduate. But many young men and women with this same qualification already choked the local labor market with an abundance of B.A. graduates as well as a smaller but still significant number of unemployed M.A. graduates.

Mohan's only resort was to return to his home village where he spent most of his time, when not farming, sitting around his elder brother's tea stall. Mohan's expectations had been raised by the experience of higher education so that he was very dissatisfied with village life. For him--a college graduate--to live a life of enforced idleness, spending each day with his uneducated brother and cohorts lounging around a tea stall, was an indignity and a source of deep shame. Mohan desperately wanted to establish his identity as an educated person by obtaining some type of professional employment, no matter how modestly paying, to prove to himself and others that he was not merely another "country person". Thus, he had been socialized toward and accepted the prevailing value that village life was second-rate and undesirable. Even if his college education had given him a battery of skills that he could have used in helping revitalize his home village--which he had not--exposure to the smug, self-satisfied world of the district capital elite had poisoned his attitude about the tenability of an educated person living in a village with any trace of respectability.

Even at the elementary level of education, the idea that village life and education are mutually exclusive or, at least, divergent processes, is deeply engrained. A particularly successful village schoolmaster in a remote, bleak Maharastrian village named Hatkar provides an illustrative case study. Mr. Hatkar had, by 1980, served more than forty years as a village schoolmaster. During those years he had trained young people who had gone on to become reasonably successful in the larger outside world: judges, police officers, soldiers, school teachers. But none of his elementary school graduates who had gone on to secondary or higher education had later returned to live in the home village. Thus, even in a village which had a hard-working and conscientious school head, there is no suitable role for an educated person in that or most villages. The only avenue for an educated person is to find some employment in a larger town or city. The "brain drain" of talented youths depletes villages of their main source of potential salvation: educated leaders.

Based on these examples and other field observations it would seem safe to postulate three major issues that must be addressed to achieve a village-oriented, scientific problem-solving thrust to India's rural education system:

1. The need to design a curriculum content and an information delivery system that will encourage village youths to reside in their home village upon graduation from secondary school or college, and to work collectively to improve it.

2. The need to develop an adult education system that can deal effectively with enormous social, economic, political, and cultural constraints. This issue is of considerable importance because of past sins of omission on the part of educational policymakers, before and after Independence, that neglected the tough task of educating more than a handful of village people.

3. The need to coordinate, facilitate, and integrate modern scientific knowledge into the deeply engrained folk culture of village life. The existing conceptual tool-kit of most villagers includes a broad range of customs and practices regarding acceptable strategies for solving many types of problems. Educators advocating modern, scientifically-derived problem-solving techniques must thus compete with established, familiar remedies in a more straight-forward, conscious contest and demonstrate their superiority.

The breadth and scope of these issues attest to the cultural quiescence of existing educational systems at the village level. That is, the educational system currently operating in practice is one that does little to threaten the status quo of village life. A latent, apparently unintended function of the present system serves to filter out those young people who might be potential indigenous change-agents and isolates them from village life. Young people become more and more inappropriate and superfluous in the village as their educational level increases. Conversely, established village patterns and attitudes receive little or no competition from external ideas and values because everyone living there has the same nominal level of formal education. At the same time, any observer of village life for more than a few minutes quickly realizes that villagers share an enormous pool of informal education passed on to them casually but constantly by their parents, peers, and patrons. Villagers are highly trained in the expectations others have toward someone of their status level, the proper relationships that exist between different role players in village life, and the accepted manner for dealing with life's problems. Thus, education as an informational system that seeks to alter traditional/historical village cultural patterns hardly exists at the village level. Change is kept outside of the village by attitudes and practices that constrain the internalization of new ideas and the residence of those persons who would be the bearers of such ideas: the educated.

Obviously, the foregoing analysis should not be construed to mean that there is a conscious or deliberate strategy afoot either among village leadership circles or national educational policymakers to isolate village life from fresh currents of change-inducing knowledge. Obviously, no conspiracy of that sort exists in any formal sense. But what does seem to exist, judging from the limited effect of rural educational programs, is a lack of concern--an absence of outrage--among both villagers and educational leaders, that village educational systems are not having a more profound revelational impact of the average villager's life. There would seem to be too much complacency and contentment about the present insufficiency of influence (from the perspective of a Western educator) on village life by new insights on old dilemmas.

Without more systematic research, it is the approach of this author to assume the most charitable explanation for this present educational gap: there is a lack of knowledge on the part of educational policy-makers about how to design a more appropriate village education curriculum, and, there is a corresponding lack of understanding among villagers as to what they might reasonably expect form a more appropriate village-oriented educational system. Assuming, for the sake of argument, such a problem source, the following suggestions are offered as possible alternative directions for current village-level educational programs:

"BRIDGE" CURRICULUM

There is need for some form of curriculum which will bridge or link the existing folk knowledge of village life with important modern scientific concepts. Knowledge does not exist in a vacuum nor can villagers function as whole human beings without some kind of basic rules for solving daily problems. That is, there cannot be a whole-sale eradication or "wiping the slate clean" of existing villagers outlooks and information. Rather, there must be a gradual but steady infiltration of those long-engrained notions about how to prevent smallpox, treat snakebite, plant crops, purify food and water, and many other practical matters which make up a villager's daily round.

What is needed to transmit this knowledge at the level of both elementary and adult education is a curriculum which is a creative, conscious synthesis of old symbols used as a vehicle for new knowledge. Villagers are often keenly responsive merely to signs and emblems that, in their view, embody ancient wisdom. It is not beyond the bounds of ethical social science to propose some manipulation of those symbols in a manner that will promote the closer integration of villagers with the greater national system external to their community.

An example of such a synthetic approach is provided by the work of some successful development efforts in rural India. For example, Albert Mayer's (1958) work in rural Etawah District (U.P.) included the dissemination of information on modern agricultural technology and improved health care practices via the vehicle of a newsletter. This periodical was published under the title Mandir Se (From the Temple) in conscious recognition of the power which traditional religious forms had (and still have) over village life. Similarly, efforts to popularize new high-yielding varieties of grain have made use of customary village concepts, often with a religious orientation. For instance, during the late 1960s, hybrid kitchen garden seeds supplied by U.N.I.C.E.F. were being distributed in rural U.P. under the rubric of "shankar beej" (super or powerful seeds). The connotation of the 'shankar' appellation is patently theological in that a common epithet for Lord Shiva is "Shankar-Ji".

At a minimum, more attention should be directed to the pioneering work of F. L. Brayne, district commissioner in Guraon during the 1920s. Brayne's efforts in designing textbooks ("Modern Village Readers") that would be comprehensible, interesting, and useful to villagers has had far too little imitation in recent years. While much of the adult education work done in recent years has sought to rectify a prolonged imbalance in village educational patterns, there is still much to be done by India's large cadre of well-educated social scientists (particularly anthropologists) to design a more appealing village lesson, both for youths and their parents.

MORE MODERN ROLE-MODELS

The only major effort to provide a village-based helper or "friend" was the village-level worker (v.l.w.) or gram sevak, program pioneered in Mayer's Etawah work and later adapted by the Government of India's Community Development Programme. Few analysts have assessed the v.l.w. role as operationalized in the field to have achieved its intended outcome. In fact, most observers regard the typical v.l.w. as little more than a low-ranking government bureaucrat who lacked the confidence and enthusiasm of most village cultivators.

Gangrade (1968), for example, argued that the average v.l.w. was too overburdened with administrative work to be an effective change agent. Moreover, the v.l.w. had neither the high status needed to convince villagers to change their traditional ways via intimidation nor sufficient human relations training to induce villagers' spontaneous participation in national modernization.

Recent research conducted in a rural Maharashtrian village (Alliband and Jacob, 1983) suggests that many villagers actively seek "good guidance" as a source of aid and information about how to improve their economic well-being. This search for enlightened, beneficent help is an engrained village practice in the case study community (and possibly many other rural Indian villages) stemming at least partially from a traditional tendency for lower status persons to play the role of student in relation to higher status persons, especially Hindu priests (Brahmins). While the Westerner from a sociocultural background positing participatory democracy and self-reliance may rebel at this unabashed dependency behavior, such a pattern is a mainspring of rural village life.

It is doubtful that the ordinary v.l.w.'s advice will be sought after if he lacks higher bureaucratic status than he has had typically in the past. For, it is not merely the words which provide "good guidance", but is also the level of social prestige of the speaker of those words which make the advice "good" or important. Ways must be found of providing village workers with more prestige--such as providing a higher wage or some other symbol of prestige--before they will become effective in many village contexts. Moreover, village workers often need more extensive education themselves, to make them "modern men and women" before they can be effective change agents under the intensive questioning and scrutiny of their skeptical village pupils.

NEEDED: AN INFORMATION EXPLOSION

Typically, rural India is a less than stimulating environment for its lifelong inhabitants. Daily life is a well-patterned routine that has been learned rote from one's parents and is closely similar--if not virtually identical--to the life of everyone in one's immediate life setting. Villagers (Alliband and Jacob, n.d.) refer to their unchanging ways in positive terms as a sign of their constancy and fidelity to traditional norms established by their ancestors. For them, "living in a rut" is not regarded as something to regret but as an affirmation of their good character and high-minded morality. Change is felt to be odious and discomforting, not a situation that is sought after by responsible people.

Such a glorification of the status quo ante as the height of civilized conduct poses significant hurdles for the internalization of new ideas and behaviors in village life. Education, e.g., the collective knowledge of humankind concerning effective means for solving problems, faces stiff competition from the "sociology of knowledge" so deeply and pervasively entrenched in any village's social atmosphere. The only possible way in which education can hope to complete in an effective manner is for a massive explosion of new information that will challenge and "defeat" the existing traditional ontology.

Such an onslaught of new knowledge must be a concentrated and coherent package of concepts and technologies which will provide villagers with a whole system for meeting important survival needs. Previous efforts at village adult education have been piecemeal or had a limited scope such as adult literacy, social education, or improved agricultural practices. Only in very rare cases, such as the work done by early Christian missionaries in the "canal colonies" (Pande, 1967) has any semblance of holistic modern education been provided to young village children. Modern technology has now provided the tools which would facilitate an intensive educational program on a broad scale. Resources such as video cassette recorders, films, and satellite television programs can bring the outside world to villagers' eyes and ears in a reasonably effective manner. Their impact is most pronounced when instructional media are carefully focused on the existing "mindset" and familiar world of the villagers. Skits, plays, and idactic materials must be carefully pretested before they are aired or, as has happened, villagers will lose interest in watching television (Agrawal, 1979).

The above policy guidelines share a common commitment to the notion of appropriate education as a continual learning process. What was appropriate learning in a North American classroom in 1900 is largely out-of-date in the 1980s. Societies evolve over time and their education systems must adapt to new priorities. Certainly the societies of the Third World are no less in need of educational systems that are responsive to their most pressing national interests and needs. Yet, unfortunately, one finds that the rural public education systems of India have little of importance for the young village boy or girl in terms of modernizing impact. What that existing system does best is to prepare its students to preserve the village's traditional culture. Thus, that system acts to reinforce the values of the village elders by perpetuating the powerful influence of conservative, cautious, and stagnant customs.

While there is nothing sacred or imperative about the "new" and "changing", it is clear that the tenacious influence of traditional mores and practices on village life has produced an educational system that is very inappropriate for modernization in any significant degree or systematic manner.

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